

Proposed Reforms to the Toxics Release Inventory Program: Streamlining Reporting and Preserving Data Integrity

FINAL REPORT

**U.S. Small Business Administration
Office of Advocacy**

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The Office of Advocacy, an independent office within the U.S. Small Business Administration, has primary responsibility for government-wide oversight of the Regulatory Flexibility Act of 1980 (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). The principal goal of the RFA is to identify and, if possible, lessen the burdens federal regulations place on small entities. The Office of Advocacy sponsored this report under contract SBAHQ-00-D-0006. The statements, findings, conclusions, and recommendations found in this report are those of the authors and do not necessarily reflect official policies of the Office of Advocacy, the U.S. Small Business Administration, or the U.S. Government.



**OFFICE OF ADVOCACY
U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, DC 20416**

April 14, 2004

The Honorable Kimberly T. Nelson
Assistant Administrator for Environmental Information
U.S. Environmental Protection Agency
Ariel Rios Building, 2810A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

**Re: Proposed Reforms to the Toxics Release Inventory Program:
Streamlining Reporting and Preserving Data Integrity**

Dear Assistant Administrator Nelson:

As we promised in the February 4th letter to you, we have enclosed a copy of a report prepared by our contractor, Jack Faucett Associates, providing findings and recommendations for improvements to the Toxics Release Inventory program. We applaud EPA's efforts in this area and hope that your work will lead to paperwork burden relief for TRI reporters by July 2005 (for the 2004 Reporting Year).

We recommended specific changes to TRI reporting (specifically revisions to the Form A, and development of a Form NS) in our September 2, 2003 comment letter on the the agency's Information Collection Request. The contractor report provides a detailed analysis of some of the regulatory alternatives that EPA should be considering for revisions to the TRI reporting requirements. While the report contains the standard disclaimer which appears on all of our contractor reports that the report does not "necessarily" represent the views of our office or other Federal agencies, our office does generally agree with the conclusions and recommendations of this report. We also recommend that EPA consider other regulatory options that reduce reporting burden and

maintain the integrity of the TRI database in its future rulemaking activity. The Office of Advocacy looks forward to working together on this important task. If you have any questions or comments, please feel free to call me or Assistant Chief Counsel Kevin Bromberg at (202) 205-6964, or email at kevin.bromberg@sba.gov.

Sincerely,

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Chief Counsel for Advocacy

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Enclosure

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Executive Summary

The Toxic Chemical Release Inventory program (TRI) administered by the U.S. Environmental Protection Agency (EPA) offers citizens, regulators, and the business community access to a wealth of information about potential environmental hazards in communities across the United States. Businesses expend more than \$300 million annually to fulfill the legal and civic responsibility of reporting to the TRI program.

The U.S. Small Business Administration's Office of Advocacy has a congressional mandate to seek improvement of federal programs that adversely affect small business entities. The SBA Office of Advocacy has worked to ameliorate TRI program's impact on small businesses since its inception in the late 1980s. Several of the Office of Advocacy's suggestions have been implemented, including the creation in 1994 of the Form A certification statement. Form A allows facilities that generate small quantities of chemical waste to file abbreviated annual reports, saving businesses millions of dollars every year. Nevertheless, the TRI database still contains many thousands of reports that show no release or small releases of toxics, for which the time consuming and costly standard reporting format is still required. Despite EPA's public commitment since 1997 to provide paperwork relief, it has added new chemicals and additional facilities to the TRI reporting requirements without providing promised relief.

The EPA has initiated a Stakeholder Dialogue to investigate ways of reforming the TRI program's reporting burden on business while preserving data quality.¹ The Office of Advocacy suggests that these goals can be met through the implementation of four steps:

- Expanding eligibility for Form A and enhancing it to include range-reporting of waste data,
- Allowing facilities with no significant year-to-year changes in TRI activities to file a newly proposed form, tentatively titled Form NS,
- Allowing range-reporting on all sections of Form R, and
- Reducing the reporting burden on petroleum and chemical wholesalers.

These proposals are based on Options 1, 3, 4, and 5 of Phase II of EPA's Stakeholder Dialogue. They have the potential to save facilities tens of millions of dollars every year in reporting and other regulatory costs while having minimal effect on the quality of TRI data.

¹ EPA, *Stakeholder Dialogue Phase II*.

1 Introduction

1.1 An Overview of the Toxics Release Inventory Program

The Toxic Chemical (or “Toxics”) Release Inventory (TRI) is a federal government program that collects and disseminates information about toxic chemicals that are either introduced into the environment or otherwise managed (e.g., treated or stored) in the United States. Nearly 650 toxic chemicals and toxic chemical categories are currently subject to TRI reporting. Nearly 25,000 manufacturing, mining, electric power generation, and chemical and petroleum wholesaler facilities, among other entities, are required to submit annual reports about their releases and waste management of these chemicals to the U.S. Environmental Protection Agency and to state agencies.

Reporting to the TRI is required by section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA or Title III of the Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499). Section 6607 of the Pollution Prevention Act of 1990 expanded reporting requirements to include toxic chemical source reduction, energy recovery, recycling, and treatment data. In 1993, EPA expanded the list of covered chemicals for the first time. In 1994 it added 286 more chemicals and chemical categories. Also in 1994, EPA amended TRI regulations to permit facilities with low levels of waste to report via a shorter Form A Certification Statement, beginning in 1995. All other facilities continued to use the standard Form R. Pursuant to a 1993 executive order, federal facilities began reporting in 1994. In 1997,

EPA amended the TRI regulations to require annual reports from certain mining, electric power generation, hazardous waste management, and petroleum and chemical wholesaler facilities. (Covered industries are based on the Census Bureau's Standard Industrial Classification or SIC codes). Previously, only facilities in the manufacturing sectors had been required to report. In 1999, EPA expanded the chemical list yet again and divided it into two categories: persistent bioaccumulative toxic (PBT) chemicals and non-PBT chemicals. PBT chemicals are subjected to stricter reporting thresholds and ineligible for Form A. In 2001, EPA added lead and lead compounds to the PBT chemical list, resulting in a fourfold increase in Form R filings for that chemical category. (Filings grew from 2,025 in 2000 to 8,734 in 2001.) Many of the new reports describe zero on-site releases whose right-to-know value to the public is questionable.

EPA committed to reduce the burden of paperwork associated with reporting as far back as 1997 when it expanded the number of covered chemicals and industries. In its October 1, 1996, Terms of Clearance document for TRI data collection, the Office of Management and Budget (OMB) asked EPA to investigate changes, including specifically the adoption of a higher reportable amount for Form A eligibility. In 1998, the Toxics Data Reporting Subcommittee to the National Advisory Council for Environmental Policy and Technology (NACEPT) offered opinions on raising the alternate threshold, but the council never filed formal recommendations and no action was considered by EPA. OMB has continued issuing requests for burden reduction since 1996 as part of the Information Collection Request process.

EPA is now engaged in a Stakeholder Dialogue process to identify improvements to the TRI and to reduce the reporting burden on facilities.² This report evaluates burden reduction proposals that offer substantial relief to small businesses and other entities with minimal effect on TRI data quality. The key issue is to identify methods that retain the information that is valuable to the public, either by retaining the current Form R (for the most significant chemical reports), while reducing the overall burden by establishing an alternative form of reporting for the reports with minimal or no public interest (such as a modified Form A).

1.2 An Overview of TRI's Benefits and Cost

1.2.1 TRI's Benefits

The primary benefit of the TRI program is that it provides the public with information about specific toxic chemicals manufactured, processed, and otherwise used in their communities.³ Before enactment of EPCRA, this information was not available from one source, and was often not available from any source. TRI allows the local community to gain information about air, water, and land releases of hundreds of chemicals from a given facility and to compare these data to other facilities throughout the country.

Environmental advocates heavily rely upon TRI data to identify affected communities and to evaluate environmental impacts. Insurance companies and creditors utilize TRI data to evaluate potential environmental liabilities.

² EPA initiated a Stakeholder Dialogue process in September 2002, to identify improvements to the Toxics Release Inventory to develop opportunities to reduce the burden on reporting facilities. This is maintained as online dialogue on the EPA E-docket website. Phase II of the Dialogue is focused on burden reduction options.

³ For more information about how TRI data are used, see U.S. Environmental Protection Agency, *How Are the Toxics Release Inventory Data Used?*, EPA-260-R-002-004 (May 2003).

Government entities benefit from regularly-updated data about toxic chemical release and waste management practices. Regulators are apprised of chemical location and disposal and are able to evaluate the need to revise or add regulatory controls, to establish regulatory priorities, and to augment and evaluate other environmental programs. The TRI database allows environmental agencies to assess industry pollution prevention initiatives and to identify environmental solutions that could be applied elsewhere by examining the practices at facilities with low releases.

Facility operators utilize TRI data for self-evaluation. Environmental managers benefit by investigating their own usage of toxic chemicals and by analyzing standardized data about the chemical management practices of competitors. Facilities can reduce operating costs by identifying inefficient usage of chemicals. Industry also uses TRI data as a public relations tool, to demonstrate progress in pollution prevention to communities and to other stakeholders.

The focus of the TRI program is releases, hence the name, Toxics Release Inventory. This is the natural result of the fact that risks to the community from toxic chemicals is based on exposure, which in turn is related to the release of the chemical from the covered facility. Since the largest releasing facilities pose the largest risks, the TRI program has focused on the largest releasers. In the early years, EPA initiated its voluntary 33/50 program. The program's goal was to reduce the release of 17 chemicals to 33 percent, then 50 percent of their initial levels. Hundreds of the top 600 plants achieved considerable reductions, often in excess of the EPA 50 percent final goal.

Facilities have taken steps to reduce releases into the environment since the inception of the TRI program, and many attribute this in part to the information that the TRI program has made available to the facilities and the public. Total on-site and off-site releases (of the same chemicals reported in 1988) decreased 54.5 percent between 1988 and 2001.⁴ Ninety percent of the total emissions are contributed by a small portion of the total sources. Naturally, the vast majority of these release reductions came from the very largest emitters. TRI data users are primarily interested in such large emitters.

On the other hand, few small release plants participated in the 33/50 program. These sources were of less concern to the community, and many had already performed pollution prevention and pollution control activities, such that their releases were already insignificant. A 50 percent decrease was no longer feasible or worth the expense. Government regulations, for example, require decreases of air toxics emissions from “major sources” of air toxics, those emitting over 10 tons per year of a given chemical, many of which are covered by TRI reporting. However, since the TRI reporting requirement is based on the chemical throughput (manufacturing, processing or otherwise using), and not the releases, many thousand TRI reports are currently required from facilities with zero or minimal releases to the environment.

More recently, the TRI program’s focus on the most significant releases has declined. The addition of several hundred chemicals in 1994, additional reporting industries in 1997, and the reduction of reporting thresholds for a new class of chemicals in 1999 and

⁴ EPA, *2001 Toxics Release Inventory Public Data Release*, p. ES-24.

2001 has required reporting of an additional tens of thousands of very small releases.

Thus, the need for relief from TRI reporting has grown substantially since 1994.

1.2.2 TRI's Costs

Facilities collectively expend over \$300 million dollars every year to prepare, submit, and analyze TRI reports.⁵ Managerial, technical, and clerical staff expend many hours on familiarizing themselves with the rule; calculations and certification; completing the forms; recordkeeping; and submitting the forms. Since the debut of Form A in 1995, EPA had maintained that the average facility saves 17.5 hours by filing Form A in lieu of Form R for single-chemical reports after the first year. However, EPA recently reduced its estimates of the average hours expended on calculations and certification by two-thirds. As a result, EPA now estimates that the burden reduction associated with Form A is 5.8 hours for the years following the initial report.

Industry groups dispute EPA's revised estimate of reporting burdens and support its original figure. For simplicity, this report will use EPA's estimated costs for various Form A regulatory options derived in 1994 to determine cost savings for various Form A scenarios.

In addition to direct compliance costs associated with a TRI filing, facilities bear substantial indirect costs from "piggyback" requirements associated with a TRI listing. The federal storm water permit program and some state pollution prevention programs

⁵ Chemical Manufacturers Association (now American Chemistry Council), September 27, 1999, Comments to EPA.

regulate facilities based upon their TRI reporting status. Some states impose taxes and fees based upon TRI filings.⁶ A 1994 report by Price Associates estimated the scope of the indirect, added costs associated with the addition of chemicals to the TRI list in 1994.⁷ Their analysis concluded that the overall total costs of direct compliance with the TRI expansion would be as much as six times the EPA estimate of the reporting costs (which did not take into account the “piggyback” costs). While EPA estimated \$89 million in subsequent-year annual compliance costs for the new chemicals, Price Associates estimated a range of \$233 million to \$340 million annually.

Government entities at all levels also expend large sums to process, analyze, and disseminate TRI reports. EPA estimates \$26 in variable costs for each form processed, which amounted to nearly \$2.5 million in 2001.⁸ This report estimates the total costs savings as facilities switch from Form R to Form A, using EPA-derived costs. We do not present costs for other alternatives, such as the Form NS.⁹

Beyond the costs of reporting and other indirect costs, a facility’s inclusion in the Toxics Release Inventory potentially erodes community goodwill and imposes a stigma on the site. Citizens may misunderstand basic features of the TRI program and assume that a facility that reports to the TRI is synonymous with a Superfund site. Confused by the

⁶ In 1998, at least 17 states had “piggyback” requirements for Form R filers. See Policy Planning and Evaluation, Inc., *Analysis of Alternative Reporting Thresholds for Toxic Release Inventory Form A*, February 18, 1998, p. 8.

⁷ Price Associates, *Critique of USEPA’s Regulatory Impact Analysis of the Proposed Rule to Add Certain Chemicals to the Toxics Release Inventory* (Final Report), May 2, 1994.

⁸ *Toxic Chemical Release Inventory, Alternate Threshold for Low annual reportable amounts; Toxic Chemical Release Reporting, Information Collection Request Supporting Statement* (Oct. 2003), p. 17.

⁹ The Form NS has been suggested by EPA to substitute for a report which shows no significant change from a previous year baseline Form R report.

misleading “Release Inventory” designation, data users could mistakenly conclude that “total production-related wastes” are entirely transmitted into environmental media and overlook the fact that this figure includes quantities treated, recycled, and consumed in energy recovery. Community members may also focus disproportionately on relative quantities of the wastes, not on the chemicals’ varying risks. Therefore, more is at stake to TRI facilities than the dollars and cents of filing forms and other regulatory costs.

2 The Current Situation of TRI Reporting

2.1 A Statistical Summary of Reporting

TRI facilities with chemicals exceeding the reporting thresholds currently must file one of two forms every calendar year: Form A or Form R. Facilities must file a separate Form R for each chemical that meets the reporting threshold. Multiple chemicals can be reported on a single Form A. Nearly 25,000 facilities submitted forms in 2001. Figure 1 compares Form R and Form A filings for 2001. Of the 95,000 TRI forms filed, more than 87 percent were Form R's. Form A's comprised the remaining 13 percent. TRI facilities file an average of about four TRI chemical forms per facility.

Figure 1: Form R and Form A Filings in 2001

Type of TRI Form	# of Forms	%
Form R	83,218	87.1%
Form A	12,295	12.9%
Total	95,513	100.0%

Source: 2001 Toxics Release Inventory Public Data Release, Table ES-1.

Facilities must file a separate Form R for each chemical that meets the reporting threshold. Multiple chemicals can be reported on each Form A.

Persistent bioaccumulative toxic (PBT) chemicals are a class of TRI chemicals that cannot be reported on Form A. Figure 2 shows that 19.1 percent of all Form R filings in 2001 were for PBT chemicals. The Form A reform proposals in this report would

potentially affect the 68,025 non-PBT chemical forms filed. In addition, under certain conditions, EPA could also consider making PBT chemicals eligible to be reported on Form A.

Figure 2: TRI Filings of PBT and Non-PBT Chemicals in 2001¹⁰

Chemical Type	# of Forms	%
PBT	16,064	19.1%
non-PBT	68,025	80.9%
Total	84,089	100.0%

Source: EPA TRI database (December 2003)

2.2 Contents of the TRI Reporting Forms

2.2.1 A Comparison of Form R and Form A

Form A is much shorter than Form R (two pages versus five pages). Form A only includes information identifying the facility and a certification that total chemical wastes (the annual reportable amount or ARA) do not exceed 500 pounds. Just one chemical can be filed on each Form R, but multiple chemicals can be reported on Form A.

Both Form R and Form A request similar facility identification information in part 1, including data about the parent company. In part 2, Forms R and A ask for toxic chemical identity (section 1) and mixture component identity (section 2). Form A's part 2 ends here, while Form R's part 2 contains five additional sections. Form R provides information about how the toxic chemical is used (section 3) and the maximum amount

¹⁰ The total Form R's in Figure 1 differs from the total in Figure 2 because the updated TRI database for RY 2001 has approximately 900 additional Form R's than were reported in the Public Data Release.

of the chemical on-site at any time during the year (section 4). It also asks for data on the quantity of toxic chemical entering each environmental medium on-site (section 5).

Facilities report the total releases of the chemical into air, water, underground wells, landfills, and other media and provide the name of the affected stream or water body for releases to water. In section 6, Form R reporters disclose transfers of toxic chemicals in wastes to off-site locations; in section 7 they provide data about on-site waste treatment, energy recovery, and recycling.

Section 8 is unique to Form R. Its first eight components, elements 8.1 through 8.8, ask for summary data about quantity of toxic chemicals:

- Released through normal processes on-site and off-site (8.1),
- Used for energy recovery on-site and off-site (8.2 and 8.3),
- Recycled on-site and off-site (8.4 and 8.5),
- Treated on-site and off-site (8.6 and 8.7), and
- Released directly into the environment or sent off-site for energy recovery, recycling, treatment, or disposal due to remedial actions, catastrophic events, or one-time events (8.8).¹¹

Many of elements 8.1 through 8.7 are based on data reported in other sections of Form R.

Element 8.1 combines data from sections 5 and 6 and subtracts figures reported in element 8.8; it includes both on-site and off-site releases. Elements 8.3, 8.5, and 8.7

¹¹ For precise definitions of elements 8.1-8.8, see *Toxics Release Inventory Reporting Forms and Instructions*, pp. 59-62.

utilize data reported in section 6 and subtract a portion of element 8.8. Elements 8.2, 8.4 and 8.6 concern on-site data and are reported only in section 8.

Element 8.9 of section 8 requires calculation of a production ratio (ratio of reporting-year production to prior-year production) or an activity index (based on a variable other than production that is the primary influence on the quantity of the TRI chemical released, treated, recycled, or used for energy recovery). This element allows data users to examine the relationship between facility output or input and waste levels. The remaining portion of section 8 includes queries about source reduction activities.

The sum of elements 8.1 through 8.7 is used to determine eligibility for the Form A Certification Statement. If the sum of elements 8.1 to 8.7 for a non-PBT chemical is less than or equal to 500 pounds, then the facility falls below the “annual reportable amount” threshold and is eligible to file Form A.

Facilities must supply figures for elements 8.1 through 8.7 for four years: the prior year, the current reporting year, and two years following. Prior year data is culled from the prior year’s Form R or from the facility’s operating logs or invoices. Estimates for future years are based on planned current source reduction activities, market projections, expected contracts, anticipated new product lines, company growth projections, and production capacity figures.

2.2.2 Range-Reporting

In sections 5 and 6 of Form R, facilities can report data for non-PBT chemicals in range codes if annual amounts are less than 1,000 pounds.¹² Range-reporting is not allowed in section 8, even though elements 8.1 through 8.7 largely restate data that may be disclosed as ranges in sections 5 and 6. Range-reporting is not permissible for PBT chemicals. Proposal I in this report suggests that Form A could be “enhanced” to allow range-reporting for some data that currently is reported on Form R.

Some TRI stakeholders contend that range estimates deprive data users of precise information. However, precise data about small releases or chemical wastes is generally not of public interest and is often unavailable. Imprecision has been a part of TRI’s architecture from the beginning. Accurate, but imprecise, data does fulfill community right-to-know obligations. Generally, a small degree of imprecision does not adversely affect the analysis of environmental effects, and it reflects the practical limits of data estimates. The EPCRA statute says that facilities may use readily available data or reasonable estimates and no special monitoring or measurement is required.¹³ In general, data need only be reported with two significant digits, recognizing the imprecision of available data and estimation techniques. For example, some estimation methods for fugitive air emissions are uncertain by an entire order of magnitude. As discussed above, facilities are permitted to report small quantities of some TRI data via range estimates, recognizing that precise data for minimal chemical amounts is unduly burdensome to facilities and of insignificant public interest.

¹² The three range codes are as follows: A = 1-10 pounds, B = 11-499 pounds, and C = 500-999 pounds.

¹³ See 42 U.S.C. § 11023(g)(2).

2.2.3 The Exception for *De Minimis* Concentrations

The *de minimis* concentration exemption allows TRI reports on non-PBT chemicals to disregard certain minute concentrations of chemicals in mixtures or other trade name products that they process, otherwise use, or manufacture as impurities. If the amount of reportable toxics in a mixture or trade name product is at a concentration of less than 0.1 percent for a carcinogen or less than 1 percent for all other non-PBT chemicals, then a facility is exempt from counting that chemical as part of its TRI reporting responsibility. These requirements mirror the OSHA requirements that exempt reporting of these same concentrations on Material Safety Data Sheets (MSDSs). The *de minimis* concentration exemption does not apply to PBT chemicals, although the MSDSs are not required to report such small concentrations.

Many TRI facilities use the MSDSs that accompany mixtures and trade name products to determine chemical concentrations for TRI reporting. Therefore, MSDSs may not provide accurate concentration listings or any listing below the *de minimis* concentration levels, especially if the chemicals listed include an ingredient that is a trade secret. If TRI facilities are to comply strictly with reporting requirements for PBT chemicals, then they may need to make costly assessments of the missing data. One consultant to small business on TRI reporting contends that many facilities that deal with lead and lead compounds are currently not reporting and that revision of these reporting requirements

would result in the largest burden reduction in the TRI program.¹⁴ The consultant suggests that the *de minimis* exemption be reinstated for lead and lead compounds, except when a product containing lead is combusted. He asserts:

Do we care that there is lead in the lumber to make wooden products, the anthracite coal for filtering our water, a trace in aluminum or plastics, or in leaded solder? If this were adequately reported by industry, there would be far more R forms filed than there are...We might care about lead in wood waste combusted in boilers and vented to the atmosphere. This rule needs to be changed.

2.3 Eligibility Criteria for Reporting with Form R and Form A

When TRI reporting commenced in 1987, only Form R existed. Form R was expanded after the Pollution Prevention Act of 1990 mandated additional reporting requirements. In November 1994, EPA promulgated an alternate TRI reporting threshold and created Form A to relieve some facilities' reporting burden. Using 1992 TRI data, EPA estimated that about 20,100 of the 82,000 Form R's (nearly 25 percent) would qualify for Form A at the 500-pound threshold. The Form A Certification Statement was first used in reporting year 1995.

EPA's 1994 Response to Comments for the rule instituting Form A emphasized that Form A satisfied the legal requirement that TRI reports capture a substantial majority of releases. Most importantly, EPA found that the certification statement itself conveyed an adequate level of information to the public about the particular chemical. That document explained:

¹⁴ Stakeholder Dialogue, Ed Zarger representing AGI-Aegis Co., December 10, 2003, TRI-2003-0001-0052.

[The] certification statement...serves to satisfy the statutory requirement of section 313(f)(2) for reporting to be obtained on a substantial majority of releases of a chemical...[A] certification statement is necessary in order to maintain public right-to-know and to meet the statutory ‘substantial majority’ of releases requirement. The certification statement relates to a range volume for a given chemical contained in total waste that can have multiple connections to quantitative line items as reported on Form R...EPA believes that the category and level established in this final rule are such that replacement of full Form Rs, for these eligible reports, with certification statements provides the public with an adequate level of information.¹⁵

In justifying the creation of Form A, EPA declared that it was balancing the reduced reporting burden against the potential loss of data. EPA noted that capture of 99.95 percent of the releases and transfers data in the full Form R was an appropriate level of information for the public. The analysis accompanying the final rule instituting Form A stated:

EPA has established the alternate threshold for manufacture, process, or otherwise use of 1 million pounds in order to provide those facilities with annual reportable amounts not exceeding 500 pounds per chemical with a lower burden reporting option, while preserving more detailed data for facilities that manufacture, process, or otherwise use larger volumes of chemicals. A 1 million pound alternate threshold for amounts manufactured or processed, with annual reportable amounts not exceeding 500 pounds, represents an efficiency of 99.95 percent and EPA believes this level is likely to include the vast majority of facilities meeting the category.¹⁶ EPA also believes that establishing the alternate threshold at 1 million pounds is an effective means to retain more detailed information where exceedingly large volumes of toxic chemicals are managed.¹⁷

¹⁵ EPA Response to Comments, Form A Rule, 1994, pp. 52, 54.

¹⁶ EPA cites 99.95 percent of “releases and transfers” in this text, while the same threshold also captures 99.99 percent of the total production-related wastes which became the “annual reportable amount” in the final rule. Both figures can be found in Table 1 of the 1994 Federal Register announcement of the final rule implementing Form A.

¹⁷ “Alternate Threshold for Facilities With Low annual reportable amounts; Toxic Chemical Release Reporting; Community Right-To-Know; Final Rule,” *Federal Register*, November 30, 1994 (59 Fed. Reg. 61488). <http://www.epa.gov/docs/fedrgstr/EPA-TRI/1994/November/Day-30/pr-3.html>.

In 1998, representatives from EPA, the Office of Management and Budget, and the U.S. Small Business Administration's Office of Advocacy studied Form A usage based on RY 1996, the second year for which Form A was available. The report found that although 10.1 percent of all reports submitted in 1996 were Form A, 26.2 percent of all reports met the Form A eligibility criteria.¹⁸ In other words, facilities chose the Form A option for fewer than one-half of the reports eligible for it. The analysis also concluded that 41.5 percent of all facilities required to report were eligible to use Form A in 1996, but only 15.5 percent of them did so.

For many facilities, reporting relief through Form A was short-lived. In 1999, EPA established the PBT chemical list and deemed PBT chemicals to be ineligible for Form A, although this decision was widely criticized. Many reporters disputed the wisdom of denying this option for all PBT reports, particularly for reports showing minimal or zero releases to the local community. Beginning in RY 2001, lead and lead compounds joined the PBT chemical list and Form R filings for these chemicals increased four fold (from 2,025 reports in RY 2000 to 8,734 in RY 2001).

Under current regulations, facilities are required to file annual Form R's if they

- (1) operate in certain manufacturing, mining, and other industries
- (2) manufacture, process, or otherwise use certain quantities of listed toxic chemicals or chemical categories above the applicable threshold
- (3) are a facility with ten or more employees and

¹⁸ Analysis of Changes to the Alternate Threshold Provisions, May 18, 1998.

(4) are not filing Form A.¹⁹

If a facility does not meet all of the first three criteria in a given year, it is exempt from TRI filing for a particular chemical.

For non-PBT chemicals, the current thresholds are 25,000 pounds for chemicals manufactured (including imported) or processed, and 10,000 pounds for chemicals otherwise used. For most PBT chemicals, the thresholds are lower; a facility must file Form R if it manufactures, processes, or otherwise uses more than 100 pounds of a single PBT chemical. Highly bioaccumulative chemicals have even lower thresholds (10 pounds). PBT chemicals must be reported to the nearest tenth of a pound, whereas non-PBT chemicals must only be reported to the nearest pound. Dioxins have the most stringent threshold, a mere tenth of a gram manufactured, processed, or otherwise used triggers the reporting requirement, provided that the facility has ten or more employees and is in a covered industry.

To qualify for filing Form A in lieu of Form R under existing regulations for non-PBT chemicals, facilities must:

- Generate 500 or fewer pounds of total production-related waste (sum of elements 8.1 through 8.7 on Form R) of a particular TRI chemical (the annual reportable amount) and
- Manufacture, process, or otherwise handle 1 million or fewer pounds of the particular chemical (the alternate threshold).

¹⁹ 40 CFR 372.22 (2004).

This report proposes that more facilities be granted reporting relief by making more Form R filers eligible to file Form A by making the following changes:

- Increasing the ARA threshold to 1,000, 2,000, or 5,000 pounds, or
- Redefining the ARA as routine releases (element 8.1 of Form R) or as releases and transfers (elements 8.1, 8.6, and 8.7) and setting the threshold at 500, 1,000, 2,000, or 5,000 pounds, or
- Increasing the threshold to 10 million pounds, and
- Allowing PBT reporters to use Form A.

The report also proposes modification of Form A to include range estimate information for quantities of releases and wastes and creation of a new Form NS that would permit facilities with non-significant changes in production or release/waste quantities from one reporting year to the next to file very brief reports in subsequent years.

Figure 3 presents the Form R filings that may have been eligible for Form A in 2001, in addition to the 12,300 Form A's that were filed. Nearly 10,700 non-PBT Form R's reported 500 or fewer pounds of production-related waste, satisfying the annual reportable amount criterion for Form A. If these facilities were under the alternate threshold of 1 million pounds manufactured, processed, or otherwise used, then they could have filed Form A in lieu of Form R for that chemical in 2001. (Since facilities are not required to disclose the quantity of toxic chemical manufactured, processed, or otherwise used, the TRI database cannot be used to identify facilities that exceeded the alternate threshold.)

Figure 3: Form R Filings That May Have Been Eligible for Form A in 2001

Total Production-Related Waste (sum of 8.1 through 8.7)	# of Forms	%
<= 500 lbs. (may have been Form A-eligible)	10,696	15.7%
> 500 lbs. (not eligible for Form A)	57,329	84.3%
Total Non-PBT Form Rs	68,025	100.0%

Source: EPA TRI database (December 2003)

Many facilities that are currently eligible to file Form A for their reports continue to file Form R. Some facilities choose not to file Form A because Form R provides more information to TRI data users; information found on Form R can demonstrate that releases are minimal or that total wastes have decreased. Others file Form R because they use multiple chemicals, most of which do not qualify for Form A. For administrative simplicity, they continue to file Form R for all chemicals, even those that are eligible for Form A. Some facilities may satisfy the 500 pound annual reportable amount, yet exceed the 1 million pound alternate threshold. Many are concerned with EPA's enforcement policy that treats an erroneous Form A report as a TRI nonreporter, and would not want to risk making an error in its Form A eligibility status.

The American Petroleum Institute, in its January 2004 comments, indicates that it believes that this enforcement policy is the primary reason for the reluctance of facilities use Form A. Instead of considering erroneous Form A reports as nonreporters, EPA should treat errors in completing Form R and Form A equally.²⁰ After all, the primary enforcement priority is on nonreporters, not those facilities who willingly identifying

²⁰ Raising the annual reportable amount or the threshold would also increase facility confidence in the Form A certifications, and allow more facilities to employ the form.

themselves for scrutiny by EPA enforcement personnel. Those who complete forms in good faith should be treated equally.

2.4 The Burden of Reporting

When EPA created the Form A Certification Statement in 1994, it estimated that the total cost to industry for TRI reporting was \$345 million per year.²¹ This figure has increased over the past decade due to expansion of the covered chemical list, creation of the PBT chemical class, the increased number of industries subject to the reporting, and inflation. According to the American Chemistry Council, the total estimated national reporting cost of the TRI program was \$661 million in 2001.²²

In 1994, EPA also estimated the direct cost savings associated with completion of various versions of Form A in comparison with Form R. Under the current rule, a facility may use Form A if the annual reportable amount, defined as total production-related waste (the sum of elements 8.1 through 8.7 of Form R) is less than 500 pounds. Using the definition of ARA in the current rule, the cost savings of Form A over Form R is \$916 in the first year and \$979 per year for each subsequent year.²³ If the ARA is based simply on the total of releases and transfers (the sum of elements 8.1, 8.6, and 8.7), then savings with each Form A filing are \$1,264 in the first year and \$1,330 in subsequent years. Cost savings are greater for the ARA based on releases and transfers because fewer elements

²¹ EPA/OPPT, *Toxic Release Inventory-Small Source Exemption Issues Paper*, Appendix B-2, January 27, 1994, p. 12.

²² Chemical Manufacturers Association (now American Chemistry Council), September 27, 1999, Comments to EPA, Table 5.

²³ *Regulatory Impact Analysis of the EPCRA Section 313 Alternate Threshold Final Rule*, November 18, 1994, pp. 4-10.

are required in threshold calculations. (Elements 8.2 through 8.5, energy recovery and recycling, are excluded.)

When the ARA is defined as “releases” (exclusively element 8.1), one can assume that filers would incur additional savings over the releases and transfers criterion because elements 8.6 and 8.7 would no longer be part of the calculations. This report assumes an additional \$300 in savings, or \$1630 per Form A.

Figure 4 displays EPA’s existing and revised burden hour estimates for Form R and Form A in the first year of reporting and in subsequent years for the average facility with one chemical. According to EPA, facilities save 24.4 hours by filing Form A in the first year and save from 5.8 (existing estimate) to 17.5 hours (revised estimate) in subsequent years.

Figure 4: TRI Burden Hour Estimates: Form R vs. Form A (For One Chemical)

Activity	Hours per year	
	Existing Estimate	Revised Estimate
First Year of Reporting		
Rule Familiarization	34.5	34.5
Compliance Determination	16	16
Form R	74	74
Form A	49.6	49.6
SAVINGS with Form A	24.4	24.4
Subsequent Years of Reporting		
Compliance Determination	4	4
Form R	52.1	19.5
Form A	34.6	13.7
SAVINGS with Form A	17.5	5.8

Source: 9/24/03 Terms of Clearance Memo, p. 4.

Reporting burden is higher at facilities that use PBT chemicals than at those that do not because the reported data must be more precise and there is no *de minimis* concentration exclusion.

These estimates are for the direct burden of federal TRI reporting only. State-imposed piggyback requirements and other indirect burdens associated with Form R filings are not included. Facilities that are subject to piggyback fees and reporting mandates linked to Form R filings would enjoy additional benefits by substituting Form R with Form A that are not taken into account in this table. For example, Nevada requires facilities to pay a fee of \$500 per Form R submitted (up to a maximum of \$5,000 per facility operator), but no fee is associated with Form A submittals.²⁴ On its Release and Pollution Prevention Report (RPPR, also known as DEQ-114), New Jersey compels facilities to submit throughput data not required on Form R: amounts of chemical brought on-site, produced on-site, consumed in the manufacturing process, and shipped off-site in or as a product. New Jersey also has a lower throughput threshold of 10,000 pounds for manufacturing and/or processing for facilities that submitted at least one Form R (compared to EPA's 25,000-pound threshold).

EPA has committed to reduce paperwork for TRI reporters as far back as 1997 when it expanded the TRI list to new industries and chemicals, including hundreds of new small business reporters, particularly the chemical and petroleum wholesalers. OMB has asked EPA to consider paperwork reduction in the review of a series of Information Collection

²⁴ *Nevada Revised Statutes* (NRS) 459.744(1)(d).

Requests since 1996, including examination of several of the options discussed in this report. EPA formulated options for the National Advisory Council for Environmental Policy and Technology (NACEPT) in 1998, but the committee never delivered any formal recommendations to the agency, and no action was taken. The current Stakeholder Dialogue is EPA's most recent effort to address this issue.

In OMB's October 1, 1996, Terms of Clearance for TRI data collection, OMB stated, "EPA should seek to make changes, where appropriate, to the program such that they are effective for the 1997 report filed in July of 1998." OMB specifically requested that EPA "check its projections of reductions in paperwork burden against the actual number of the Forms A submitted" and that EPA "should examine the effects of adopting a higher reportable amount such as 1,000 or 5,000 pounds and of raising the alternate threshold from 1 million pounds to 5 or 10 million pounds." Furthermore, OMB asked EPA to evaluate exclusion of recycling and energy recovery from the ARA and to explore the possibility of using releases rather than wastes as the basis for reporting. Instead of burden relief, EPA has increased TRI requirements since OMB's 1996 request by adding several industry sectors to the program in 1997 and by creating the PBT chemical category in 1999. Facilities required to participate in the TRI still await relief.

3 Reporting Challenges

With over 95,000 forms filed annually by nearly 25,000 facilities in myriad industries, TRI reporters have substantial experience with the program. Many have critiqued the reporting process in the current Stakeholder Dialogue Phase II and in other forums over the years. Facilities with zero or small releases question whether the value of their data justifies their reporting effort. The current definition of the annual reportable amount (total production-related waste, sum of elements 8.1 through 8.7 of Form R), excludes thousands of facilities from using the Form A option because their non-release activities (energy recovery, recycling, or treatment) cause them to exceed the 500 pound total waste threshold. Persistent bioaccumulative toxic (PBT) chemicals, especially lead and lead compounds, have introduced additional reporting issues unique to their classification (ineligibility for Form A, inability to use range-reporting on sections 5 and 6 of Form R, and loss of the *de minimis* concentration exemption).

This section presents TRI reporting concerns from the perspectives of facilities that do not deal with PBTs and those that do. It also discusses a proposal to change the frequency of reporting to every other year.

3.1 Concerns of Non-PBT Reporting Facilities

Some stakeholders say that the current ARA (sum of elements 8.1 through 8.7) is an overly broad threshold for Form A eligibility. One consultant who advises small

businesses on the TRI has advocated that the ARA be limited to releases (element 8.1) because “[t]his is the area most likely to be of concern to the public.”²⁵ In comments on the creation of Form A in 1994, commenters almost universally opposed the establishment of a waste-based threshold because (1) the threshold was not risk-based, (2) there would be considerably less paperwork savings, and (3) it was a disincentive to pollution prevention.

Many facilities assert that their reports containing zero or small releases do not contribute meaningfully to the TRI database. An Iowa tire retreading firm reported a release of four pounds of zinc to a sewer and 100 pounds of zinc in air emissions because the rubber that it processes has a 2 percent zinc content. A facility representative commented, “I know I speak for other environmental managers when I remind you that our real job is on the production floor, assisting in waste reduction. Generating a report showing that 4 pounds per year of zinc was discharged to the sewer is not time well spent.”²⁶

A Massachusetts paper manufacturer reported zero release of two chemicals, sulfuric acid and phosphoric acid, which are neutralized in the facility’s wastewater. Source reduction is not a viable option for this facility. Sulfuric acid is used to adjust the pH of recycled pulp; the company and Massachusetts cannot identify any alternative. Phosphoric acid is used only as a nutrient to aid in wastewater treatment. A facility manager writes:

²⁵ Stakeholder Dialogue, Ed Zarger representing A GI-Aegis Co., December 10, 2003, TRI-2003-0001-0052.

²⁶ Small Business Coalition (Coalition) for a Responsible Toxic Release Inventory Policy, *Comments in Support of the Small Business Administration's August 1991 Petition to Exempt "Small Sources" of TRI Emissions from the TRI Database*, Jan. 8, 1993, p. 6.

Thus, we are forced to report chemicals for which we have no releases due to on site treatment. In the case of one chemical, there is no substitute. In the other case, it is used exclusively in the pollution control process. What purpose does the reporting serve? Does the information help us do anything differently? No.²⁷

The animal feed industry also copes with TRI reporting requirements that seem to add little value to community right-to-know. Nickel and zinc reporting provide two examples. Nickel is a catalyst in some feed products, but only 163 pounds were reported released in 1989 for the whole industry. Of the facilities that reported zinc releases, nearly half had releases of ten pounds or less. Manufacturers of poultry and livestock feed indicate that in over 90 percent of their reports, less than 500 pounds of copper, zinc, and manganese compounds are reported to be released.

Many facilities in the food processing industry would qualify for Form A if energy recovery, recycling, and treatment were excluded from the ARA definition. Many acid users in the food industry are ineligible for Form A because their neutralization of acids is counted as on-site treatment of toxic chemicals (element 8.6 of Form R), causing them to exceed Form A's threshold of 500 pounds of total production-related waste (sum of elements 8.1 through 8.7). They argue that it is inappropriate to include treatment in the ARA because it penalizes facilities that have no releases of the chemical.

²⁷ Small Business Coalition (Coalition) for a Responsible Toxic Release Inventory Policy, *Comments in Support of the Small Business Administration's August 1991 Petition to Exempt "Small Sources" of TRI Emissions from the TRI Database*, Jan. 8, 1993, p. 7.

A release-based threshold is closer to congressional intent in establishing the Toxics Release Inventory. Since release into the environment is most directly related to risk, the interest in the detailed information about a facility generally correlates with the amount of release. In addition, the statutory requirement to capture a “substantial majority” of releases argues for a release-based concept.

Since there is little risk associated even with facilities that perform on-site recycling or energy recovery, information about these activities generally is of less concern to the local community. Some argue that such reports are relevant under the Pollution Prevention Act because they provide information to the public about other waste management activities, such as treatment, energy recovery, and recycling. Others have stated that the pollution prevention reporting requirements are only applicable to Form R reporters, and that the Pollution Prevention Act did not modify the original requirements of the TRI statute as to who should be required to report. Specifically, the PPA specifies that EPA include “with each annual filing a toxic chemical source reduction and recycling report.”²⁸ This language shows that the PPA “source reduction and recycling report” supplements the TRI report, where it applies. The PPA also specifically reiterates that no provision of the PPA amends or modifies the TRI requirements. Thus, EPA is free to modify the TRI requirements (such as modifying the ARA) under the provisions of EPCRA without any concern that it is contravening the PPA requirements.

In addition, those who have small releases generally have little or no pollution prevention activity to perform. For example, the National Soft Drink Association, in its 1994

²⁸ PPA section 6607(a).

comments, indicated that soft drink manufacturers commonly use over 10,000 pounds of phosphoric acid each year, with no releases into the environment (it is a soft drink ingredient) and supported eligibility for Form A based on release quantities. “For a food processor whose only reportable substance is an FDA-approved food ingredient for which there are zero releases, [it] is an absolute absurdity. There is neither a ‘source’ which merits reduction nor any ‘pollution’ to prevent.”

Facilities in the chemical and petroleum wholesale industries also report low levels of releases. EPA extended TRI reporting requirements to chemical and petroleum wholesalers in 1997 despite the Office of Advocacy’s opposition on the grounds that their releases to the environment were insignificant. Subsequent data releases have confirmed that releases by the chemical and petroleum wholesale industry were at low levels. In 2001, these industries accounted for 8.5 percent of all TRI reports filed but only 0.4 percent of all toxic releases to the environment.²⁹

Most significantly, a release-based threshold provides another important tool in promotion of pollution prevention. All facilities that release TRI chemicals in excess of the release-based exemption level would strive to get below that level to receive substantial paperwork and regulatory relief. Therefore, a release-based reporting exemption should provide an important new incentive for pollution prevention.

Elimination of data on minimal releases would allow EPA, the states, and the public to

²⁹ Written Statement of Thomas Sullivan, Chief Counsel for Advocacy, U.S. Small Business Administration, Subcommittee on Energy and Minerals Committee on Natural Resources U.S. House of Representatives On Toxics Release Inventory Rule: Costs, Compliance, and Science, September 25, 2003, p. 3. See proposal IV, Section 4.4 for further discussion of this issue.

focus on significant sources of toxic chemical emission. EPA could direct its enforcement resources to facilities that are more likely to affect the environment. Protection of the environment would be better served if EPA used the several million dollars it currently spends on collecting, reviewing, and maintaining the minimal release data for other purposes such as enhancing the public accessibility of the database or implementing measures that actually protect the environment. Furthermore, as a matter of fairness, a facility should not bear the stigma of being labeled a TRI facility when, in fact, its releases are inconsequential.

3.2 *Concerns of PBT Reporting Facilities*

EPA regulations designated a class of persistent bioaccumulative toxic (PBT) chemicals beginning with reporting year 1999. In RY 2001, lead and lead compounds were added to the PBT chemical list, and facilities that manufacture, process, or otherwise use more than 100 pounds were required to file Form R.³⁰ EPA added lead and lead compounds to the PBT chemical list because it believed that a significant amount of these chemicals were being released or treated as waste and were not being reported. Unfortunately, with the exception of a few hundred sites, most of which are landfills and mines, the great majority of new reports that the rule generated are unlikely to be of interest to the public. The median on-site release of lead and lead-based compounds is only one pound.

Lead and lead compounds constitute a substantial portion of the TRI database for PBT chemicals. As shown in Figure 5, lead and lead compounds accounted for 59.3 percent of

³⁰ The lower reporting threshold for lead applies to all lead except when it is alloyed with stainless steel, brass, or bronze.

the Form R's filed for PBT chemicals in 2001. Lead and lead compounds comprised 97.5 percent of non-dioxin PBT on-site releases (subset of element 8.1) and 96.4 percent of non-dioxin PBT total production-related waste (sum of elements 8.1-8.7) in 2001.³¹

Figure 5: Lead and Lead Compound vs. Total Non-Dioxin PBT Filings in 2001

	# of Forms	% of Forms	On-site Releases (lbs.)	% of On-site Releases	Total Production Related Waste (lbs.)	% of Total Waste
Lead/Lead Compounds	8,734	59.3%	389,571,429	97.5%	1,270,104,976	96.4%
Other Non-Dioxin PBT Chemicals	6,000	40.7%	9,814,745	2.5%	46,908,146	3.6%
Total Non-Dioxin PBT Chemicals	14,734	100.0%	399,386,174	100.0%	1,317,013,122	100.0%

Source: Compiled from EPA Form R database (December 2003)

Reports for lead and lead compounds more than quadrupled in 2001 as a result of the lowered reporting threshold for these chemicals. Whereas only 2,025 forms were filed for lead and lead compounds in 2000, 8,734 forms were filed in 2001 after the threshold was lowered. The American Chemistry Council has estimated the national costs for TRI reporting for RY 1998 through RY 2001. Between RY 2000 and 2001, it estimates that total costs increased from \$607.5 million to \$660.8 million, largely due to the lowered threshold for lead and lead products.³²

Many Form R's for lead and lead compounds indicate no or insignificant on-site releases.

In 2001, 3,220 facilities reported zero on-site releases of lead and lead compounds.³³

Some of these zero-release sites are concentrated in certain industries: nearly 90 percent

³¹ Although there are thousands of insignificant lead reports, there are about one hundred lead reports with very high release quantities (virtually all of which document disposal into regulated landfills).

³² Chemical Manufacturers Association (now American Chemistry Council), September 27, 1999, Comments to EPA, Estimated National Costs for TRI Reporting, 1998-2001.

³³ Compiled from EPA Form R database (December 2003).

of the 276 petroleum bulk terminals (SIC 5171) in the lead and lead compounds TRI database for 2001 had zero on-site releases.

Figure 6 shows that the mean on-site release from a TRI lead and lead compound facility is 44,604 pounds versus a median of a mere 1.0 pound.³⁴ Routine releases (including both on-site and off-site releases) averaged 49,628 pounds in 2001.³⁵ The median routine release of lead and lead compounds was 24 pounds. The mean total production-related waste at TRI lead and lead compound facilities was 145,421 pounds compared to a median of 392 pounds. The large variance between the mean and the median reflects the fact that there are thousands of very small release reports (see section 4.2 below), and 40 sites with releases in excess of 1 million pounds (landfills and mines). The high number of insignificant reports provides EPA with a large opportunity to make revisions to the TRI reporting requirements for these facilities without harming the utility of the database.

Figure 6: Mean and Median Lead/Lead Compounds On-Site Releases, Routine Releases, & Total Waste in 2001

	On-Site Releases (lbs.)	Routine Releases (lbs.) (8.1)	Total Production-Related Waste (lbs.) (8.1 through 8.7)
Mean	44,604	49,628	145,421
Median	1	24	392

Source: Compiled from EPA Form R database RY 2001 (December 2003)

³⁴ The mean is skewed by large mining operations. For example, the Red Dog zinc concentrates mine in Alaska alone accounted for nearly one-third of all on-site releases of lead and lead compounds in 2001.

³⁵ Routine releases are defined as normal production-related releases excluding one-time events reported in section 8.8 of Form R.

TRI reporters with low releases and wastes of lead and lead compounds are frustrated with the annual Form R reporting requirement. So long as a facility manufactures, processes, or otherwise uses 100 pounds of lead and lead compounds, it must file a Form R, even if all of the lead is incorporated into a product and none is released. Proposal II in Section 4 of this report proposes that lead and lead compounds facilities be permitted to file a Form NS in years when a facility releases fewer than five pounds on-site. Alternatively, EPA could employ a modified Form A for PBTs (to reflect the lower reporting threshold).

As discussed above in section 2.2.3, reporters of non-PBT chemicals have a *de minimis* concentration exemption that allows them to exclude concentrations of non-PBT chemicals of less than 1.0 percent (0.1 percent for carcinogens) from their quantity calculations. Since this exemption is not available to PBT chemicals under the current rule, the inclusion of lead/lead products on the PBT list in RY 2001 may have contributed to a significant increase in the number of facilities required to file reports.

At least three commenters in the Stakeholder Dialogue have called for lead and lead compounds to be eligible for the *de minimis* concentration exemption, as they were before EPA added them to the PBT chemical list in 2001. A commenter in the food package manufacturing industry states that suppliers guarantee that lead is not present below 100 parts per million in polyethylene resin that is used to make the containers.³⁶ According to the commenter, the Food and Drug Administration and the U.S. Department

³⁶ Stakeholder Dialogue Phase II, Anonymous Commenter, Nov. 25, 2003, TRI-2003-0001-0028.

of Agriculture believe that lead below that threshold cannot adversely affect the food that it contacts. The commenter observes:

How can lead ... be harmful to a landfill when bound up in plastic, when it does not even present a significant risk to food? The EPA is being very silly in this case, unnecessarily causing industry to waste resources and harm the EPA's credibility.

A comment from the wood products industry addressed the issue of lead as an impurity in lumber.³⁷ The commenter observed that two of his wood processing facilities had zero releases; the third had less than one pound. However, the lack of a *de minimis* exemption for lead causes the company to submit three Form R's per year. The commenter implied that pollution prevention is not viable and that his reports add little to the TRI database:

Clearly we have no method of controlling the lead in the raw material and cannot reduce our amount processed below the 100 pound threshold unless we stop processing lumber. Labeling wood products facilities as lead processing facilities is misleading.

Lead that is alloyed with stainless steel, brass, or bronze is currently eligible for the *de minimis* concentration exemption. One commenter proposes that the exemption be extended to lead in all grades of steel because "[i]t is added for the same purpose and has the same minimal effect upon the environment."³⁸

The National Federation of Independent Business (NFIB) urges EPA to simplify TRI reporting for lead. "The guidance documents are needlessly confusing, and must be simplified in order for small entities to be certain what their requirements are," NFIB

³⁷ Stakeholder Dialogue, Anonymous commenter, November 6, 2003, TRI-2003-0001-0010.

³⁸ Stakeholder Dialogue, Sauer Danfoss comment, November 6, 2003, TRI-2003-0001-0004.

says.³⁹ NFIB observes that the compliance guide for lead has more than 200 pages and that other documents that presumably facilitate reporting are also lengthy. The lack of clear guidance is also costly to non-filers, as NFIB found in its informal survey of small businesses:

Perhaps the most interesting response ... was from the business owner who reported that he did not have to comply with TRI filing, but he had to spend “17-40 hours to make sure.” Clearly, the EPA needs to use better and more succinct executive summaries in the guidance documents to enable business owners to ascertain relatively quickly whether compliance is in fact required. All of this searching process (at about \$50 per hour) is another added cost of perhaps \$1000 (20 hours at \$50 per hour) to a small business owner.⁴⁰

NFIB also contends that releases are difficult to estimate because EPA has provided emissions factors for few industry sectors.⁴¹ Furthermore, NFIB noted that the removal of the *de minimis* concentration exemption for lead is problematic because supplier notification of such low concentration levels is not required.⁴² As a result, facilities are uncertain what to report. “Our members want to do the right thing,” NFIB says, “but find themselves hamstrung by having to spend time and energy figuring out just what it is that the government wants.”⁴³

As stated earlier, the *de minimis* concentration provision is based on the equivalent provision in OSHA’s MSDS requirements. Based on the above comments, EPA should reinstate the *de minimis* concentration provision for PBT reporters. Proposal II in Section 4 of this report suggests that a different type of *de minimis* standard be established for

³⁹ Karen Harned, NFIB Legal Foundation, et. al. to EPA Document Control Office, Dec. 22, 2003, p. 2.

⁴⁰ *Id.* at 8.

⁴¹ *Id.* at 6.

⁴² *Id.*

⁴³ *Id.* at 9.

lead and lead compounds in conjunction with a new Form NS (one based on a *de minimis* on-site release, not a *de minimis* concentration). Facilities that manufacture, process, or otherwise use more than 100 pounds of lead and lead compounds would be required to file Form R every five years, if their on-site releases do not exceed 5 pounds and other criteria are satisfied. Many of those who would qualify for the current *de minimis* relief would be eligible for this type of *de minimis* relief under the Form NS.

3.3 Frequency of Reporting

The American Chemistry Council (ACC) is one of many TRI stakeholders supporting a biennial reporting system for the TRI program.⁴⁴ The ACC reviewed on-site release data (Form R, section 5) for 1995, 1996, and 1997 and concluded that the majority of forms reported decreases, zero releases, no changes, or minor increases in on-site releases. Its analysis of year-to-year on-site release changes from 1995 to 1996 and from 1996 to 1997 showed that 82 percent of Form R's and A's filed reported either no change or an increase or decrease between one and 499 pounds. ACC argued, "EPA is requiring facilities to spend nearly \$3,000 per Form R, and nearly \$2,500 per Form A, to report virtually identical data on a year-to-year basis."⁴⁵

In sum, biennial reporting would provide very significant savings, but does not provide any information in the off-reporting years. The Form NS, on the other hand, has the advantage of providing significant information to the community in the off-reporting

⁴⁴ Letter, James M. Solyst, American Chemistry Council, to John Spotila, Office of Information and Regulatory Affairs, Office of Management and Budget, June 12, 2000. The ACC observes that the Resource Conservation and Recovery Act has a biennial reporting system.

⁴⁵ ACC letter, p. 3.

years, but still captures significant reporting savings. Form NS may balance better the right-to-know benefits with the industry burdens.

4 Proposed Reforms

4.1 Proposal I: Enhance Form A and Expand Eligibility

Proposal I would greatly reduce the TRI reporting burden by expanding eligibility for Form A. An Enhanced Form A would be created to preserve aggregate data quality.

This proposal is based on Option 3 in the Phase II Stakeholder Dialogue. Currently, non-PBT chemicals with annual total production-related wastes (sum of elements 8.1 through 8.7 of Form R) of less than or equal to 500 pounds may be reported on Form A. Proposal I would broaden eligibility for Form A by increasing the annual reportable amount from the current 500 pounds, or by redefining the ARA (currently, the sum of elements 8.1 through 8.7), or some combination of both. Thousands of Form R filers would be able to switch to Form A, saving facilities and regulators millions of dollars per year in reporting and processing costs. Proposal I would preserve TRI program data quality by enhancing Form A to provide range estimates of certain release and waste quantities now reported only on Form R.

Expansion of Form A eligibility is justified in that it tailors the reporting burden on the facility to the potential risk it poses to the community, as discussed earlier. EPA found that it could reasonably use Form A to address 99.99 percent of total production-related waste, without any detriment to the community's right-to-know in 1994. Thus 99.99 percent is a reasonable benchmark in 2004 for TRI data comprehensiveness through Form R's. Also, as described above, the revised Form A reporting should also provide a

reasonable amount of information to inform the community. The enhanced Form A would provide the information included in the current Form A plus additional data on toxic chemical release and waste practices.

4.1.1 Increase the Minimum Threshold of the Annual Reportable Amount

The annual reportable amount, currently defined as the sum of elements 8.1 through 8.7, could be increased from the current 500 pounds to 1,000, 2,000, or 5,000 pounds. Figure 7 shows how the various thresholds potentially would have affected non-PBT chemical Form R filings in 2001.⁴⁶ Many facilities that are now potentially eligible for Form A still file Form R's. Figure 7 shows that at the existing 500-pound level, nearly 10,700 Form R filings could be reported on Form A. This would be in addition to the 12,295 Form A reports filed.

Figure 7: Estimated Impacts of Various Thresholds With Existing ARA (Total Production-Related Waste: Sum of Elements 8.1-8.7)⁴⁷

Threshold (lbs.)	# of Non-PBT Form R's Affected	% of Non-PBT Form R's Affected	# of Newly Eligible Reports
500 (full use)	10,696	15.7	0
1,000	13,997	20.6	3,301
2,000	17,719	26.0	7,023
5,000	23,253	34.2	12,557

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 2 (based on non-PBT Form R filings for RY 2001).

⁴⁶ Note that facilities that exceed the alternate threshold amount (now 1 million pounds) are ineligible for Form A even if their total production-related waste (sum of elements 8.1 through 8.7) of a particular non-PBT chemical is 500 pounds or less. The number of such facilities is unknown, but is believed to be small. Figures in this section disregard the alternate threshold amount and assume that all facilities that satisfy the total waste ARA are eligible for the Form A.

⁴⁷ These reports are in addition to the 12,295 Form A's that were already filed for RY 2001. The 10,696 reports at the 500-lb. level are already eligible to the Form A, and thus a total of 22,991 or 33.8 percent of all non-PBT chemical TRI reports are currently eligible for the Form A.

At the 1,000-pound threshold level, nearly 14,000 chemicals reported on Form R's could be reported on Form A, an additional 3,301 forms compared to the current rule. One thousand pounds would be an appropriate threshold because currently, quantities under 1,000 pounds in sections 5 and 6 of Form R can be reported with range codes. Since exact quantities under 1,000 pounds do not need to be reported in other sections of Form R, then precise quantities should not need to be reported in section 8⁴⁸; therefore Form A is appropriate for such facilities. More than 7,000 Form R filings would be newly eligible for Form A if the threshold were set at 2,000 pounds. If the threshold were set at 5,000 pounds, then 12,557 Form R filings would be newly eligible for Form A. The Consumer Specialty Products Association advocates setting the threshold at 5,000 pounds.⁴⁹

Figure 8 shows how the various thresholds would potentially affect reporting of total production-related wastes and total releases, assuming that all filings eligible for Form A were substituted for Form R's. If all eligible facilities filed Form A at the current 500-pound threshold, then the remaining Form R's would capture 99.995 percent of production-related wastes (sum of elements 8.1 through 8.7) and 99.94 percent of total releases [routine releases (element 8.1 of Form R) + non-routine releases, energy recovery, recycling, and treatment (element 8.8)].⁵⁰ When the threshold is 1,000 pounds, the reduced reporting burden would eliminate up to 20.6 percent of Form R filings but still account for 99.99 percent of total production-related waste and 99.91 percent of total

⁴⁸ See section 4.3 on Range-reporting where this is addressed in detail.

⁴⁹ Letter, John E. DiFazio Jr., Consumer Specialty Products Association, to EPA Document Control Office, August 30, 2002, p. 4.

⁵⁰ Section 8.8 does not include only releases, but this paper uses the same nomenclature as EPA in the Stakeholder Dialogue Phase II document for consistency and comparability.

releases.⁵¹ At 5,000 pounds, more than one-third of non-PBT chemical Form R filers potentially would enjoy reporting relief in exchange for a mere 0.11 percent reduction of production-related waste data. Nearly 99.7 percent of releases would still be accounted for on Form R's.

**Figure 8: Estimated Impacts of Various Thresholds With Existing ARA
(Total Production-Related Waste: Sum of Elements 8.1-8.7)**

Threshold (lbs.)	# of Non-PBT Form R's Affected	% of Non-PBT Form R's Affected	Production-Related Waste (8.1 thru 8.7) Not Reported on Form R (millions of lbs.)	% of Production-Related Waste (8.1 thru 8.7)	Releases (8.1 & 8.8) Not Reported on Form R (millions of lbs.)	% of Releases (8.1 & 8.8)
500-Full Use	10,696	15.7%	1.32	0.005%	3.52	0.06%
1,000	13,997	20.6%	3.73	0.014%	5.20	0.09%
2,000	17,719	26.0%	9.17	0.035%	8.57	0.15%
5,000	23,253	34.2%	27.55	0.105%	18.15	0.31%
Total: All Form R's	68,025	100.0%	26,221.39	100.0%	5,810.92	100.0%

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 3 (based on non-PBT Form R filings for RY 2001).

In its July 1994 proposal on the creation of Form A, EPA estimated the impact of a total waste-based ARA (sum of elements 8.1 through 8.7) on Form R filings using RY 1991 data. At the 500-pound level, it concluded that 21,300 Form R's would be eligible for Form A, resulting in elimination of reporting on only 0.01 percent of total wastes on Form R.⁵² EPA adopted this as the Form A ARA and reporting threshold.

⁵¹ It is actually more than 99.91 percent of total releases because Section 8.8 contains one-time recycling, energy recovery, and treatment as well as one-time releases, as stated earlier.

⁵² Alternate Threshold for Facilities With Low annual reportable amounts: Toxic Chemical release Reporting; Community Right to Know; Proposed Rule, 59 Fed. Reg. 35824 (July 28, 1994), Table 2; <http://www.epa.gov/tri/frnotices/59fr38524.htm>. As discussed above in Section 2.3, in the preamble to the 1994 Form A rule, EPA found that a threshold set at 500 pounds represented 99.99 percent of total production-related waste (sum of elements 8.1 through 8.7, Form R) using RY 1991 data. With RY 2001 data, the 99.99 percent demarcation is somewhere between 500 and 1,000 pounds. In other words, since 1992, EPA has added additional non-PBT chemicals and industries to the reporting requirement with a larger proportion of smaller waste quantities associated with each report.

In 1994, EPA viewed 99.99 percent of the reporting waste data to be adequate reporting under the current scheme for Form R's.⁵³ As seen in Figure 8, the 5,000-pound scheme would lower that percentage to 99.89 percent.⁵⁴ The question becomes whether EPA can make the same finding with respect to 5,000 pounds that it made in 1994 with regard to 500 pounds. As discussed earlier, 99.99 percent was the 1994 benchmark of total reported wastes for adequate Form R data. Is 99.89 percent close enough to 99.99 percent? Is this adequate information to the public?

If the ARA were increased to 1,000, 2,000, or 5,000 pounds, TRI facilities potentially would save millions of dollars in direct reporting costs, as seen in Figure 9. As discussed in Section 2.4 above, EPA determined at the inception of Form A in 1994 that the cost difference between completion of a Form A and Form R is \$979 per year after the first filing. The calculations in Figure 9 were derived by multiplying the cost difference (\$979) by the number of Form R's eligible for Form A at each threshold. Note that these figures assume that all eligible facilities switch to Form A; actual savings may be lower. On the other hand, since these calculations do not include savings from reduction of indirect requirements, actual savings would be likely much higher.

⁵³ In RY 1996, the second year of Form A reporting, nearly 19,000 Form R's were filed that were eligible for Form A. Had all of these been substituted with Form A's, then 99.98 percent of production-related waste would still be reported. EPA, OMB, & SBA, *Analysis of Changes to the Alternate Threshold Provisions* (presented to the National Advisory Council for Environmental Policy and Technology, Toxics Data Reporting Committee), May 18, 1998, p. 9. (Table 2). Since EPA established this threshold, it agreed that the "lost" data was reasonably be substituted by the Form A.

⁵⁴ As seen above in Figure 8, if the ARA were set at 5,000 pounds, 99.89 percent of production-related waste would still be reported even if all eligible Form R's switched to Form A.

At the 500-pound threshold, if all eligible facilities used Form A, they would collectively save \$10.5 million in direct reporting costs. When the ARA is 5,000 pounds, the savings increase to \$22.8 million. Again, neither estimate accounts for indirect savings.

**Figure 9: Potential Direct Reporting Cost Savings with Existing ARA
(Total Production-Related Waste: Sum of Elements 8.1-8.7)⁵⁵**

Option	Threshold (lbs.)	Non-PBT Form R's Affected	COST SAVINGS To Filers (\$ millions)
Current Basis	500 (full use)	10,696	\$ 10.5
for Threshold	1,000	13,997	\$ 13.7
(8.1-8.7)	2,000	17,719	\$ 17.3
	5,000	23,253	\$ 22.8

Source: Compiled from EPA Form R RY 2001 database (December 2003)

4.1.2 Varying the Composition of the Annual Reportable Amount

The annual reportable amount is currently determined by the amount of total production-related waste, the sum of elements 8.1 through 8.7 on Form R. In this subsection, the composition of the ARA is reconfigured and reanalyzed at the 500, 1,000, 2,000, and 5,000 pound thresholds. In the first scenario, the ARA is based on “releases and transfers”: the sum of routine releases (element 8.1) and on-site and off-site treatment (elements 8.6 and 8.7). Unlike the current ARA, the “releases-and-transfers” definition of the ARA excludes energy recovery (elements 8.2 and 8.3) and recycling (elements 8.4 and 8.5). In the second scenario, the ARA is defined as the routine releases of the reported chemical (exclusively element 8.1). These scenarios mirror the scenarios in the Stakeholder Dialogue Phase II.

⁵⁵ These contain only the direct savings, and not the greater costs attributable to savings from being excluded from the “piggyback requirements” (such as the New Jersey cost of compiling pollution prevention plans for each Form R, irrespective of whether the chemicals are released to the environment).

4.1.2.1 An Annual Reportable Amount Based on Releases and Transfers

This section discusses reconstituting the ARA based on releases and transfers. It would be the sum of quantity released (element 8.1), quantity treated on-site (8.6), and quantity treated off-site (8.7). This option differs from the existing threshold in that it excludes quantity used for energy recovery (elements 8.2 and 8.3) and quantity recycled (8.4 and 8.5). During the 1994 rulemaking that created Form A, EPA proposed a “release and transfer” eligibility standard for Form A that is identical to the “releases and transfers”-based ARA proposed in this section.⁵⁶ EPA adopted the alternative ARA based on total production-related waste (sum of elements 8.1 through 8.7 of Form R) in the final rule, which remains the current standard for Form A.

As discussed above in Section 3, industry advocates urge that elements 8.2 through 8.5 not be included in the Form A qualification process. Since the toxic chemicals are consumed in the energy recovery scheme or re-used in the recycling process, they do not pose significant risk to their communities under normal circumstances and therefore should not be subject to right-to-know considerations. Furthermore, exclusion of these items from the ARA provides incentives to facilities to perform energy recovery and recycling activities; these are beneficial activities that EPA should encourage because they generate energy and keep chemicals within the production loop instead of releasing or disposing of them. Promotion of energy recovery and recycling have historically been major EPA goals because of the substantial environmental and economic benefits

⁵⁶ “Alternate Threshold for Facilities With Low Annual Reportable Amounts; Toxic Chemical Release Reporting; Community Right-To-Know; Final Rule,” *Federal Register*, July 28, 1994. <http://www.epa.gov/tri/fnnotices/59fr38524.htm>.

associated with these practices. The Resource Conservation and the Recovery Act, administered by EPA, establishes these goals for the agency.

Metals constitute the bulk of recycled chemicals in the TRI database. Although metals may have high toxicity in leachate form, most pose little environmental hazard in solid form. Since metals commonly generate sufficient economic savings through recycling, facilities have an incentive to release or dispose of as little of them as possible.

Reporting quantities recycled in ranges would not significantly affect a community's right to know, sources say.⁵⁷

Exclusion of energy recovery from the ARA may be more controversial because it would affect public access to information about chemicals burned in cement kilns, hazardous waste incinerators, and municipal waste incinerators. However, all these sources are subject to substantial federal regulation and are subject to the TRI reporting requirements for the combustion product chemicals. Figure 10 shows how an ARA based on releases and transfers would affect TRI filings, based on 2001 data. At the 500-pound level, 29.1 percent of Form R filers could switch to Form A. With a 5,000-pound threshold, nearly half of non-PBT Form R filers could be switched to Form A.

Figure 10: Estimated Impacts of Various Thresholds of an ARA Based on Releases and Transfers (Sum of Form R Elements 8.1, 8.6, and 8.7)

⁵⁷ Policy Planning and Evaluation, Inc., *Analysis of Alternative Reporting Thresholds for Toxic Release Inventory Form A*, February 18, 1998, p. 26.

Threshold (lbs.)	# of Non-PBT Form R's Affected	% of Non-PBT Form R's Affected	# of Newly Eligible Reports
500	19,805	29.1	9,109
1,000	24,007	35.3	13,311
2,000	28,172	41.4	17,476
5,000	33,641	49.5	22,945

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 6 (based on non-PBT Form R filings for RY 2001).

Figure 11 illustrates how an ARA based on releases and transfers would affect aggregate TRI release and waste data. Nearly 99.9 percent of releases would still be reported on Form R's. At the 500-pound level, 94.7 percent of production-related waste would continue to be reported on Form R's. If the threshold were set at 5,000 pounds, 90 percent of total wastes and 99.5 percent of releases would be captured by the remaining Form R's.

Figure 11: Estimated Impacts of Various Thresholds of an ARA Based on Releases and Transfers (Sum of Form R Elements 8.1, 8.6, and 8.7)

Threshold (lbs.)	# of Non-PBT Form R's Affected	% of Non-PBT Form R's Affected	Production-Related Waste (8.1 thru 8.7) Not Reported on Form R (millions of lbs.)	% of Production-Related Waste (8.1 thru 8.7)	Releases (8.1 & 8.8) Not Reported on Form R (millions of lbs.)	% of Releases (8.1 & 8.8)
500	19,805	29.1%	1,399.68	5.34%	5.86	0.101%
1,000	24,007	35.3%	1,698.50	6.48%	8.60	0.148%
2,000	28,172	41.4%	2,012.16	7.67%	13.68	0.235%
5,000	33,641	49.5%	2,563.18	9.78%	27.69	0.477%
Total: All Form R's	68,025	100.0%	26,221.39	100.0%	5,810.92	100.000%

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 7 (based on non-PBT Form R filings for RY 2001).

These results show less impact to total production-related waste than figures calculated by EPA in 1994 using 1992 data.

Figure 12 shows the possible cost savings that reporters would enjoy if the ARA were based on releases and transfers. EPA's Regulatory Impact Analysis for the original Form A rule stated that the cost difference between a Form R and Form A is \$1,330 for each year after the first filing if the releases and transfers constitute the ARA. To calculate the savings figures in Figure 12, the savings of \$1,330 is multiplied by the number of Form R filings that would become eligible for Form A. Savings would range from \$26.3 million at the 500-pound level to \$44.7 million at the 5,000-pound threshold (again not including indirect savings).

Figure 12: Potential Direct Reporting Cost Savings of an ARA Based on Releases and Transfers (Sum of Elements 8.1, 8.6, and 8.7)

Option	Threshold (lbs.)	Non-PBT Form R's Affected	COST SAVINGS To Filers (\$ millions)
Modified Basis for Threshold (8.1, 8.6, and 8.7)	500	19,805	\$ 26.3
	1,000	24,007	\$ 31.9
	2,000	28,172	\$ 37.5
	5,000	33,641	\$ 44.7

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 6 (based on non-PBT Form R filings for RY 2001).

4.1.2.2 Effect of An ARA Based on Routine Releases Only

An annual reportable amount based exclusively on routine releases (element 8.1 of Form R) is the narrowest ARA definition considered in this report. The current ARA is defined as the sum of elements 8.1 through 8.7. The releases-and-transfers-based ARA removes elements 8.2 through 8.5 from the calculation. The routine-releases ARA presented in this section further removes elements 8.6 and 8.7, leaving only element 8.1.

Routine releases constitute an appropriate reporting threshold because “releases,” especially releases to air, water, and underground wells, are the quintessential components of the TRI program, which was established specifically for this purpose. Element 8.1 includes both on-site and off-site releases of a routine nature; releases that are a result of remedial actions, catastrophic events, or one-time events not associated with production processes are reported separately as part of element 8.8.⁵⁸

The food processing industry advocates a routine-release-based ARA. Some food processing plants use large quantities of TRI acids (e.g. nitric acid) which are completely neutralized in the production process, resulting in large quantities of chemicals treated on-site (element 8.6 of Form R) but zero releases of the acid.⁵⁹ Polycyclic aromatic compounds (PACs), present in and created by combustion of certain fuels, are also vexing to TRI reporters in the industry. The PACs are coincidentally manufactured and are mostly destroyed by the combustion process. Using EPA’s emission factors, they are reported in the TRI as treated on-site with negligible releases. If a routine-release-based ARA were imposed, both the nitric acid and the PAC facility would likely become eligible for Form A. The public would learn that the chemicals are released at the facilities in small quantities, and the inability to know the precise quantities of the chemical would not be a loss of significant information.

⁵⁸ Element 8.8 also includes one time treatment, energy recovery, etc..

⁵⁹ Letter, Food Industry Environmental Council to EPA Docket Center, Oct. 6, 2003.

Figure 13 analyzes the effects of a routine-release-based ARA at various thresholds. At the 500 pound level, more than 28,000 Form R's could theoretically be replaced with Form A. This amounts to 41 percent of all non-PBT chemical Form R's filed in 2001.

Figure 13: Estimated Impacts of Various Thresholds With Routine Release-Based ARA (Element 8.1 only)

Threshold (lbs.)	# of Non-PBT Form R's Affected	% of Non-PBT Form R's Affected	# of Newly Eligible Reports
500	28,126	41.3	17,430
1,000	33,030	48.6	22,334
2,000	37,707	55.4	27,011
5,000	43,707	64.3	33,011

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 4 (based on non-PBT Form R filings for RY 2001).

In 1999, the Chemical Manufacturers Association (now known as the American Chemistry Council) advocated a 1,000-pound routine-release-based ARA, coupled with an increase in the alternate threshold.⁶⁰ At the 1000-pound release threshold, over 33,000 Form R filings could be switched to Form A. Another 4,700 reports could switch to Form A at the 2,000-pound level. Nearly two-thirds (64 percent) of all current non-PBT Form R filers would be eligible for Form A if the reporting threshold were set at 5,000 pounds of releases.

In Figure 13, the “newly eligible reports” column expresses the number of Form R's that become eligible for Form A at each threshold. For example, of the 28,126 Form R's

⁶⁰ Chemical Manufacturers Association, *TRI Burden Reduction Options* (revised Sept. 16, 1999), p. 23.

affected by the 500-pound threshold, only 17,430 would be newly eligible for Form A because the remaining 10,696 are already eligible under existing regulations (Figure 7).

Figure 14 shows the potential effects of a routine-release-based ARA on aggregate TRI reporting. At the 500-pound level, Form R data would be preserved for 99.9 percent of all non-PBT releases; 89.3 percent of total production-related waste would still be reported on Form R's. At the 1,000-pound threshold, the remaining Form R's would continue to report 99.8 percent of release data.

At the 5,000-pound level, the data reduction concerning releases would still be small. If all eligible facilities switched to Form A, then merely 0.68 percent of total non-PBT chemical releases would be affected as 64.3 percent of filers (43,700 forms) obtained relief. The effect on production-related waste would be more substantial, with over 21 percent not reported on Form R's.

Figure 14: Estimated Impacts of Various Thresholds With Routine Release-Based ARA (Element 8.1 only)

Threshold (lbs.)	# of Non-PBT Form R's Affected	% of Non-PBT Form R's Affected	Production-Related Waste (8.1 thru 8.7) Not Reported on Form R (millions of lbs.)	% of Production-Related Waste (8.1 thru 8.7)	Releases (8.1 & 8.8) Not Reported on Form R (millions of lbs.)	% of Releases (8.1 & 8.8)
500	28,126	41.3%	2,810.96	10.7%	7.49	0.13%
1,000	33,030	48.6%	3,426.73	13.1%	11.60	0.20%
2,000	37,707	55.4%	4,150.12	15.8%	18.80	0.32%
5,000	43,707	64.3%	5,552.86	21.2%	39.59	0.68%
Total: All Form R's	68,025	100.0%	26,221.39	100.0%	5,810.92	100.0%

Source: EPA, Stakeholder Dialogue Phase II-Burden Reduction Options, Table 5 (based on non-PBT Form R filings for RY 2001).

The Enhanced Form A, discussed below in Section 4.1.4, would mitigate the potential data reduction as data users switch from Form R. The modified Form A would provide range estimates for some or all of the elements 8.1 through 8.7. Although the information would be less precise than that reported on Form R, TRI data users could know approximately the releases and waste management practices of the affected facilities, and the modified Form A would provide much more information than the current Form A.

Figure 15 shows the potential direct cost savings associated with an ARA defined as “total quantity released” (element 8.1). As explained above in Section 2.4, this report assumes that the cost difference between filing a Form R and a Form A in subsequent years is \$1,630 per form for this option. If all facilities that met the 500-pound threshold switched to Form A, then they would collectively save \$45.8 million per year after their first year of reporting. If all facilities with releases up to 5,000 pounds substituted Form A for Form R, then TRI reporters would save \$71.2 million in direct reporting years (not including indirect savings).

Figure 15: Potential Direct Reporting Cost Savings from Routine Release-Based ARA (Element 8.1 only)⁶¹

Option	Threshold (lbs.)	Non-PBT Form R's Affected	COST SAVINGS To Filers (\$ millions)
Modified Basis for Threshold (8.1)	500	28,126	\$ 45.8
	1,000	33,030	\$ 53.8
	2,000	37,707	\$ 61.5
	5,000	43,707	\$ 71.2

Source: Compiled from EPA Form R RY 2001 database (December 2003)

⁶¹ See footnote 46.

4.1.3 Increase the Alternate Threshold to 10 Million Pounds

Regardless of how the ARA is redefined, the alternate threshold for Form A could be increased from 1 million pounds manufactured, processed, or otherwise used to 10 million pounds. As discussed above, the number of facilities that would become eligible for Form A as a result of this change is unknown because neither Form A nor Form R currently requests precise data on this quantity. However, the Office of Advocacy's review of Massachusetts 1995 reporting year data revealed that about 5 percent of the facilities would have qualified for Form A based on a 10 million-pound threshold.⁶²

EPA selected the 1 million-pound threshold in 1994 based on its presumption that it would exclude few facilities that met the ARA of 500 pounds.⁶³ The May 1998 report by the National Advisory Council for Environmental Policy and Technology's Toxics Data Reporting Committee suggested that the alternate threshold could be raised to 2 million, 5 million, or 10 million pounds. The committee report cautioned that there may be a public interest in knowing detailed data about even small waste quantities from high volume facilities because they "could provide an example to other facilities of efficient toxic chemical management practices" and reduce the probability of Form A misuse.⁶⁴ Of course, the Form R data from these same plants would still reside in the database archives from previous years, which would minimize any enforcement concerns. In the 1994 final rule preamble, the agency noted that industry commenters stated that facilities in the

⁶² Letter, Thomas M. Sullivan and Kevin Bromberg, U.S. Small Business Administration Office of Advocacy, to the Hon. Kimberly T. Nelson, Asst. Administrator for Environmental Information, U.S. Environmental Protection Agency, Sept. 2, 2003, p. 7.

⁶³ EPA, OMB, & SBA, *Analysis of Changes to the Alternate Threshold Provisions* (presented to the National Advisory Council for Environmental Policy and Technology, Toxics Data Reporting Committee), May 18, 1998, p. 11.

⁶⁴ *Id.*

metal and metal fabrication and animal feed industries exceeded the 1 million pound threshold. The Chemical Manufacturers Association favored an increase of the alternate threshold to 10 million pounds in a 1999 report.⁶⁵

4.1.4 Create Enhanced Form A

As currently designed, Form A provides TRI data users with no information about waste management practices beyond the certification that total production-related wastes (sum of elements 8.1 through 8.7) are less than 500 pounds. Some TRI stakeholders express concern that increased Form A filings would result in a concomitant loss in TRI data quality, especially to local communities, as Form R filings decline. Although proponents of Form A reform believe that the Form A certification process provides adequate information, as in the original EPA determination in 1994, the SBA Office of Advocacy has suggested that EPA go one step further in assuring that the public receives some additional waste-related information.

This report proposes the creation of an Enhanced Form A, which would include a series of range-reporting checkboxes for data that are now reported on Form R. Figure 16 is an example of the new sections that would be added to Form A. The section called “release and transfer information” corresponds to data in sections 5 and 6 of Form R that are used to calculate elements 8.1, 8.6, and 8.7. The section on “recycling and energy recovery information” is a range-reporting of the existing elements 8.2 through 8.5 of Form R. The

⁶⁵ Chemical Manufacturers Association, *TRI Burden Reduction Options* (revised Sept. 16, 1999), p. 23.

Enhanced Form A could provide all eleven rows of data reflecting all waste-related data, as shown in the following draft, or a subset of this information.

Figure 16
Draft Example of New Components on Enhanced Form A

RELEASE AND TRANSFER INFORMATION

	Annual Amount of Releases or Transfers			
	<u>Zero</u>	<u>1-999</u>	<u>1,000-99,999</u>	<u>100,000+ lbs.</u>
1. Air Emissions	yes/no	yes/no	yes/no	
2. Water Release	yes/no	yes/no	yes/no	
3. Underground Injection	yes/no	yes/no	yes/no	
4. Releases to Land On-Site	yes/no	yes/no	yes/no	
5. On-Site Treatment	yes/no	yes/no	yes/no	yes/no
6. Off-Site Transfers to POTW (Publicly Owned Treatment Works)	yes/no	yes/no	yes/no	yes/no
7. Off-Site Transfers Other Than POTW/Recycling/ Energy Recovery	yes/no	yes/no	yes/no	yes/no

ANNUAL AMOUNT RECYCLED OR ENERGY RECOVERED

	Annual Amount of Releases or Transfers			
	<u>Zero</u>	<u>1-999</u>	<u>1,000-99,999</u>	<u>100,000+ lbs.</u>
1. On-site Energy Recovery (8.2)	yes/no	yes/no	yes/no	yes/no
2. Off-site Energy Recovery (8.3)	yes/no	yes/no	yes/no	yes/no
3. On-site Recycling (8.4)	yes/no	yes/no	yes/no	yes/no
4. Off-site Recycling (8.5)	yes/no	yes/no	yes/no	yes/no

The new elements on Form A could vary depending upon the definition of the annual reportable amount. For example, if a releases-and-transfers-based ARA is adopted, then the additions to Form A could be limited to energy recovery and recycling (elements 8.2 through 8.5). This information would otherwise not be captured in the certification determination sent to EPA. Facilities would be spared the expenses of reporting the additional elements of Form R, along with the state-imposed “piggyback requirements” and fees and the public would gain energy recovery and recycling data on all Form A’s. The Office of Advocacy has suggested that the Enhanced Form A would include all of Form A’s existing components plus range estimates of some or all of the elements 8.1 through 8.7.⁶⁶

Range-reporting is not an impairment to effective TRI reporting. As currently designed, Form R already provides for range-reporting of quantities under 1,000 pounds in section 5 (quantity of toxic chemical entering each environmental medium onsite) and section 6 (offsite transfers). Range-reporting of elements 8.1 through 8.7 would not be unduly burdensome to current Form A filers because they already compile these data to determine eligibility for Form A.⁶⁷ Also, the ranges are broad enough (e.g. 1-999, instead of 1-9 pounds) to be ascertainable within a reasonably short period of time, thus preserving the costs savings from the use of Form A.

⁶⁶ Letter, Thomas M. Sullivan and Kevin Bromberg, U.S. Small Business Administration Office of Advocacy, to the Hon. Kimberly T. Nelson, Asst. Administrator for Environmental Information, U.S. Environmental Protection Agency, Sept. 2, 2003, p. 7.

⁶⁷ If, however, EPA re-defined the ARA in order to save additional estimation costs from the threshold calculation, EPA would need to account for the offsetting increase in costs to estimate the particular waste-related activities if that activity were excluded from the ARA calculation.

The Office of Advocacy has suggested that the Enhanced Form A could also be available to PBT reporters (excluding dioxins and dioxin-like compounds) with less than 50 pounds of total production-related waste.⁶⁸ If this standard had been in effect in 2001, 6,536 of the 14,734 PBT Form R reports (44.6 percent) would have been eligible for Form A based on an analysis of the 2001 TRI database as of December 2003.

Perhaps element 8.9, Production Ratio or Activity Index, might also be included on Form A. This figure is the ratio between production in the reporting year to production in the previous year. Some agencies, such as the Massachusetts Department of Environmental Protection, require Form A filers to report element 8.9 as part of its state Toxics Use Reduction (TUR) program because it “is used by the agency to calculate state wide TUR progress.”⁶⁹ As discussed below regarding Proposal II, element 8.9 could play a significant role in determining a facility’s eligibility for the new Form NS in a particular year.

As early as October 1994, the Office of Advocacy suggested the first version of the Enhanced Form A: a release-based threshold of 1,000 pounds and range-reporting for the waste-related activities. It pointed out that the EPA waste-based threshold rewards only source reduction, and not recycling, energy recovery, or waste treatment. Despite this advice, EPA promulgated a waste-based Form A form in November 1994, providing

⁶⁸ Letter, Thomas M. Sullivan and Kevin Bromberg, U.S. Small Business Administration Office of Advocacy, to the Hon. Kimberly T. Nelson, Asst. Administrator for Environmental Information, U.S. Environmental Protection Agency, Sept. 2, 2003, p. 8.

⁶⁹ Massachusetts Department of Environmental Protection, *2002 Toxics Use Reporting Instructions*.

relief only to a fraction of the facilities that warranted relief, in the view of the Office of Advocacy.

The Enhanced Form A would compensate for the detailed data that would have been reported on Form R. The Enhanced Form A is in some sense a compromise between the existing Form A and Form R. Reporting burden would not be as onerous as with Form R and data users would retain access to information about smaller facilities. The National Federation of Independent Business has endorsed the Enhanced Form A concept, stating, “The Enhanced Form A would preserve the practical utility of all reported data by allowing right-to-know users to easily access the size of releases and waste activities without placing further undue burden on reporters that release insignificant amounts of chemical waste.”⁷⁰

4.1.5 Allow Enhanced Form A For PBT Chemicals

In addition, under appropriate conditions, EPA could also consider making PBT chemicals eligible for Form A. Using the Enhanced Form A makes the expansion of Form A eligibility more likely, including its expansion to PBT chemicals. Section 3.2 of this report demonstrates the need to provide substantial relief for PBT reporters.

4.2 *Proposal II: Create and Implement Form NS*

TRI facilities would enjoy significant relief if they were allowed to file postcard-sized certifications of “no substantial revision” (Form NS) whenever changes in their year-to-

⁷⁰ Karen Harned, NFIB Legal Foundation, et. al. to EPA Document Control Office, Dec. 22, 2003, p. 12.

year operations are not significant. Form NS would minimize reporting burden at facilities that either release small amounts of chemicals or operate in a substantially similar manner year-to-year. A standard Form R filing would serve as the baseline form; eligible facilities would file a Form NS in subsequent years. PBT and non-PBT chemicals would be eligible for Form NS. This proposal is based on Option 4 in the Phase II Stakeholder Dialogue.

Facilities could file a Form NS whenever:

- year-to-year production levels increase or decrease by less than 10 percent, OR
- a *de minimis* on-site release threshold is not exceeded, AND
 - total releases (sum of elements 8.1 and 8.8 of Form R) are less than 10,000 pounds, AND
 - production, treatment, or disposal processes did not change at the facility, AND
 - less than five years have passed without filing a Form R.

The TRI database would use the baseline report to represent the facility during the years the facility files a Form NS, which could be used for up to four subsequent years. All TRI-covered chemicals would be eligible for the Form NS.

Form NS would have simple contents. In essence, it would be a certification that the facility's release and waste quantities and practices have not substantially changed since the baseline form. Checkboxes could indicate whether the facility qualifies for Form NS through the *de minimis* threshold or via the year-to-year variation criterion. Another set

of checkboxes could indicate zero releases or zero total wastes so that facilities could communicate this information to data users.

Because the 10 percent change production requirement would be inappropriate for very small releases, Form NS could also be used by any facility for which the total onsite releases were less than some *de minimis* threshold. Thus, there is a need for two types of Form NS: one based on a percent threshold; the other based on some type of *de minimis* threshold.

Form NS goes one step further by providing information in the subsequent years that the facility has not undergone any significant changes, and yet still achieves substantial burden relief to reporters. The Form NS would be especially beneficial to small businesses. Since small entities face higher per-form reporting costs than large firms, the use of the simpler form would save each small firm proportionately more than a large firm. EPA analyzed forms for the same chemical and facility in 1997 and 1998 and found that 30 percent showed changes of less than 10 percent in total releases, and 23 percent showed changes of less than 5 percent.⁷¹ This is a large number of forms. Thus, Form NS would provide relief from thousands of forms annually.

4.2.1 Criterion 1: Year-to-Year Variance in Production Process or Output Level

TRI-reporting facilities whose production, treatment, and disposal processes or output levels are consistent from year to year would enjoy burden relief with Form NS. For

⁷¹ Letter from Elaine Stanley, EPA to John Spotila, OIRA, dated July 7, 2000.

example, the criteria for Form NS eligibility could be a percentage change in on-site releases (subset of elements 8.1 and 8.8 of Form R), a percentage change in total routine releases (element 8.1), or a percentage change in total production.⁷² In addition, the facility would also certify that no significant change in material inputs, production processes, pollution prevention, and waste handling or management practices had occurred for a given chemical at the facility during the reporting year.⁷³ These criteria would ensure that the baseline Form R would be consistent with data for the Form NS reporting years. The Phase II Stakeholder Dialogue paper suggests that a facility whose total releases (sum of elements 8.1 and 8.8) or total production-related waste (sum of elements 8.1 through 8.7) increased or decreased by less than 10 percent from the baseline year should be permitted to file the Form NS for that year, provided that production, treatment, and disposal processes remain the same. The Office of Advocacy has proposed that facilities that do not modify their annual production by more than 10 percent would be eligible for the Form NS, so long as other production practices do not change.⁷⁴ In order for this alternative to be a practical alternative, the “no substantial change” determination needs to be easy to estimate. Therefore, the Form NS should not require the facility to make calculations that are as burdensome as calculating the full sections 8.1 to 8.7 data elements. TRI reporters object to the current Form A on the basis that little burden reduction results due to the requirement to make this calculation.

⁷² EPA, *Phase II Stakeholder Dialogue*, Option 4.

⁷³ For example, if a facility reported only routine releases (Element 8.1 of the Form R) and off-site recycling (Element 8.5) on the baseline Form R report, then it could not file Form NS in the following year if the facility diverted some of the chemical into energy recovery, treatment, or on-site recycling.

⁷⁴ Letter, Thomas M. Sullivan and Kevin Bromberg, U.S. Small Business Administration Office of Advocacy, to the Hon. Kimberly T. Nelson, Asst. Administrator for Environmental Information, U.S. Environmental Protection Agency, Sept. 2, 2003, p. 9.

The production ratio or activity index (element 8.9 of Form R) could be utilized to determine Form NS eligibility. Form R instructions define the production ratio as “a ratio of reporting year production to prior year production.” It is a measure of production or activity, not of TRI chemical or material usage. An index of “1.10” indicates a 10 percent annual increase in production or activity; the current existence of this index suggests that Form NS could be implemented relatively easily. In fact, the Massachusetts Department of Environmental Protection finds element 8.9 to be so useful that it requires Form A filers to continue to calculate and report it.

One commenter in the Stakeholder Dialogue suggests 5 percent as the maximum permissible year-to-year variation for Form NS eligibility because of the use of two significant digits in TRI reporting.⁷⁵ The commenter observes,

Rounding numbers to 2 significant digits allows 5 percent of the number to be rounded off and thus may produce a 5 percent error in the number ... reported. If we stay within the 5 percent range, the public information is not compromised in any way as that amount of error is already built-in to the system.

A representative of the Working Group on Community Right-to-Know has voiced support for the Form NS proposal so long as EPA carefully defines “no significant change” and it is tied to a baseline year, rather than being cumulative over time.⁷⁶ The commenter suggests 10 percent of total production waste and total releases as an appropriate limit for year-to-year variation.

⁷⁵ Stakeholder Dialogue, Anonymous Commenter (Electric Utility), December 1, 2003, TRI-2003-0001-0032.

⁷⁶ Stakeholder Dialogue, Anonymous Commenter Representing Working Group on Community Right-to-Know, December 8, 2003, TRI 2003-0001-0044.

Another commenter believes that Form NS eligibility should be pegged to a percentage change in raw material usage.⁷⁷ He states that his company currently tracks such data on a monthly basis and that “[i]t really is this raw material total that goes into computing the emissions that are on the Form R.” This comment underscores the fact that TRI data are imprecise assessments of pollution activity under current regulations; Form NS would not significantly erode data quality.

Given the appropriate criteria for applicability, the Form NS would lessen the annual form-completion burden at many facilities while data on the baseline Form R would assure that community right-to-know needs are met.

4.2.2 Criterion 2: *De Minimis* Threshold Should Be Established

Because the 10 percent change requirement would be inappropriate for very small releases, Form NS could also be used by any facility for which the total on-site releases were less than some *de minimis* threshold. Thus, there is a need for two types of Form NS: one based on a percent threshold; the other based on some type of *de minimis* threshold. The Office of Advocacy suggests thresholds of 100 pounds for non-PBT chemicals and 10 pounds for PBT chemicals (other than dioxin and dioxin-like compounds).⁷⁸ The Phase II Stakeholder Dialogue white paper suggests that 100 pounds of releases or total quantity managed as waste could serve as the *de minimis* threshold for

⁷⁷ Stakeholder Dialogue, Steve Pizzute, December 9, 2003, TRI-2003-0001-0053.

⁷⁸ Letter, Thomas M. Sullivan and Kevin Bromberg, U.S. Small Business Administration Office of Advocacy, to the Hon. Kimberly T. Nelson, Asst. Administrator for Environmental Information, U.S. Environmental Protection Agency, Sept. 2, 2003, p. 9.

Form NS for each non-PBT chemical.⁷⁹ This subsection analyzes how a *de minimis* threshold for lead and lead compounds would have affected Form R filings in 2001.

On-site releases constitute a good basis for the for the Form NS *de minimis* threshold because they most directly affect local communities. They are the quintessential component of the TRI program. On-site releases include discharges to air (by stacks, vents, ducts, pipes, leaks, evaporative losses) or to surface waters (streams, rivers, lakes, oceans), underground injection (into subsurface wells), and land releases (on-site landfills, surface impoundments, waste piles). On-site releases are components of element 8.1 [total routine releases, which include off-site releases (landfills and underground injection wells away from facilities)] and element 8.8 [which includes non-routine on-site and off-site releases and non-routine treatment and pollution prevention activities].

Total routine releases (element 8.1) and total production-related wastes (elements 8.1 through 8.7), are less desirable bases for a toxics “release” reporting threshold because release data are subsumed by other factors that pose few risks to communities. For example, off-site releases (subsets of elements 8.1 and 8.8), off-site energy recovery (element 8.3), off-site recycling (8.5), and off-site treatment (8.7) by definition occur away from the facility. On-site energy recovery (8.2) is zero for facilities reporting lead and lead compounds, and generally poses no risks to the community. On-site recycling (8.4) and on-site treatment (8.6) of toxic chemicals are activities that reduce on-site releases.

⁷⁹ EPA, *Phase II Stakeholder Dialogue*, p. 11.

Figure 17 shows how a *de minimis* threshold of 10 pounds of on-site releases of lead and lead compounds would have affected Form R filings in 2001. Nearly 65 percent of all Form R filings for these chemicals indicated on-site releases of ten pounds or less. Those 5,672 forms accounted for less than two-thousandths of one percent of lead/lead compound on-site releases and just 5.6 percent of total production-related waste for these chemicals. Figure 17 demonstrates that TRI reporters would enjoy substantial relief if the *de minimis* Form NS threshold were instituted for lead and lead compounds, with a negligible effect on national data.

Figure 17: Lead & Lead Compounds On-Site Releases in 2001: 10 lbs. Threshold

On-Site Release Threshold (subset of 8.1 & 8.8)	# of Forms	% of Forms	On-Site Releases (subset of 8.1 & 8.8) (lbs.)	% of On-Site Releases	Total Production-Related Waste (8.1 through 8.7) (lbs.)	% of Total Production-Related Waste
<= 10 lbs.	5,672	64.9%	5,945	0.0015%	70,598,196	5.6%
> 10 lbs.	3,062	35.1%	389,565,484	99.9985%	1,199,506,780	94.4%
Total	8,734	100.0%	389,571,429	100.0000%	1,270,104,976	100.0%

Source: Compiled from EPA Form R database (December 2003)

At a 5-pound threshold, 5,284 lead and lead compounds Form R's would be eligible for the Form NS, as shown in Figure 18. This is nearly 400 fewer forms than at the 10-pound threshold. If all eligible facilities used Form NS, then 99.9993 percent of on-site releases and 95.1 percent of total production-related waste would still be reported on Form R.

Figure 18: Lead & Lead Compounds On-Site Releases in 2001: 5 lbs. Threshold

On-Site Release Threshold (subset of 8.1 & 8.8)	# of Forms	% of Forms	On-Site Releases (subset of 8.1 & 8.8) (lbs.)	% of On-Site Releases	Total Production-Related Waste (8.1 through 8.7) (lbs.)	% of Total Production-Related Waste
<= 5 lbs.	5,284	60.5%	2,792	0.0007%	62,089,917	4.9%
> 5 lbs.	3,450	39.5%	389,568,637	99.9993%	1,208,015,059	95.1%
Total	8,734	100.0%	389,571,429	100.0000%	1,270,104,976	100.0%

Source: Compiled from EPA Form R database (December 2003)

Other PBT chemicals would also benefit from a Form NS based upon a *de minimis* on-site release threshold. For example, a facility that manufactures a PBT chemical within the manufacturing process that is subsequently consumed within the process would have zero releases and zero total wastes. The existence of Form NS would considerably reduce such a facility's reporting burden, and the public would lose no useful data.

4.2.3 Criterion 3: Total Releases Cannot Exceed 10,000 Pounds

Facilities with total releases (sum of elements 8.1 and 8.8 of Form R) of more than 10,000 pounds would not be eligible for the Form NS, according to the latest proposal from the Office of Advocacy. The proposal explained, “[a] 10 percent change in production for a large quantity releaser could be a significant change to the local community.”⁸⁰

4.2.4 Criterion 4: Form R or A To Be Filed At Least Every Five Years

The Office of Advocacy has suggested that facilities be allowed to file a Form NS for just four consecutive years, assuming that the other Form NS criteria are satisfied.⁸¹ To prevent data from becoming stale, facilities would be required to file a Form R once

⁸⁰ Letter, Thomas M. Sullivan and Kevin Bromberg, U.S. Small Business Administration Office of Advocacy, to the Hon. Kimberly T. Nelson, Asst. Administrator for Environmental Information, U.S. Environmental Protection Agency, Sept. 2, 2003, p. 10.

⁸¹ *Id.*, at 9.

every five years, even if their releases or total wastes remain under the *de minimis* threshold or their output or production processes remain exactly the same. The five-year cycle would ensure that the diverse users of TRI data continue to receive up-to-date information. One commenter comment observes that a five-year cycle would be compatible with other environmental reporting practices and data uses because many air pollution dispersion models utilize five-year time series.⁸²

Some TRI stakeholders, such as the American Chemistry Council, have advocated an alternate year reporting system in which facilities would report TRI data every other year. Form NS goes one step further by providing information in subsequent years that the facility underwent no significant changes, and yet still achieves substantial burden relief for Form NS reporters.

Since PBT chemicals pose potentially greater environmental risks, perhaps the five-year limit for Form NS could be restricted to non-PBT chemicals. PBT chemical filers could be on a shorter reporting cycle, requiring a Form R every three years.

4.3 Proposal III: Range-Reporting

This range-reporting option, described in Stakeholder Dialogue Option 5, also offers substantial relief to those who will be reporting on Form R. As EPA found in 1991, the option to report in ranges, rather than in point estimates, relieves the reporter of a considerable burden. EPA estimated a 9.5-hour reduction in 1991 when it was proposing

⁸² Stakeholder Dialogue, Anonymous commenter, November 7, 2003, TRI-2003-0001-0013.

to promulgate the range-reporting option.⁸³ Range-reporting will save time if the needed precision in reporting is reduced, for example from two-digit precision to one-digit. Furthermore, allowing range-reporting has the additional benefit of providing the facilities with increased comfort in making their estimates. If EPA allowed range-reporting to the pollution prevention section (section 8), the savings previously permitted in sections 5 and 6, the releases and transfer sections, could be captured. Currently, many of the entries in sections 5 and 6 and duplicated in section 8, and facilities are no longer able to capture these cost savings for the entries in sections 5 and 6 from range-reporting. In addition, EPA could reconsider the elimination of range-reporting relief for the PBT reporters. The PBT reporters are subject to considerable burden for reporting releases that equal or approach zero. For these reasons, the range-reporting option is suitable for such reports, possibly with reduced ranges for PBT chemicals, in comparison to the non-PBT chemicals, reflecting a possible additional need for precision.

4.4 Proposal IV: Reporting Threshold for Small Chemical and Petroleum Wholesalers

Option 1 in the Stakeholder Dialogue discusses the implementation of higher reporting thresholds for small businesses, while Option 2 discusses the same for specified chemicals or facilities. Under either option, EPA should seriously consider a significant burden reduction for chemical wholesalers and petroleum bulk terminal operators. The 1997 TRI expansion of the list of covered chemicals and industries led to the inclusion of SIC 5169, wholesale chemical distributors (NAICS 424690), and SIC 5171, petroleum bulk stations and terminals (NAICS 424710) for the first time. At that time, both

⁸³ 56 Fed. Reg. 1154, January 11, 1991.

industry representatives and the Office of Advocacy informed EPA that because these industries routinely report low release amounts, the value of the data to the public did not warrant the high cost of reporting the facilities in these industries would face.⁸⁴

Subsequent data has borne out that contention: the SIC 5169 and SIC 5171 facilities now required to file have filed a significantly higher-than-average number of forms (Form R and Form A) and reported significantly lower-than-average chemical releases per form.

In June 2002 testimony before the House Small Business Committee Subcommittee on Regulatory Reform and Oversight, Chief Counsel for Advocacy Thomas M. Sullivan wrote: “Despite our opposition to the expansion of the TRI to chemical and petroleum wholesalers on the grounds that releases to the environment were insignificant, EPA did promulgate that requirement in 1997. The Office of Advocacy stands by its projections that were later verified by EPA’s summary graph [Figure ES-3] from the 2000 data release [see enclosed Attachment A]. The graph shows the reported releases were essentially zero for these industries for all three years [1998-2000] – they make up less than six-hundredths of one percent of the total reported releases. With these figures in mind, Advocacy is hopeful that EPA will re-examine the decision to expand TRI to these industries.” Both trade associations representing these industries have asked EPA to either exempt these industries entirely, or provide a reporting exemption, based, for example on the number of employees.

⁸⁴ Letter, Jere W. Glover, U.S. Small Business Administration Office of Advocacy to Lynn Goldman, Assistant Administrator for Prevention, Pesticides, and Toxic Substances, U.S. Environmental Protection Agency, Sept. 25, 1996.

Across all industries, the average TRI-reporting facility filed 3.84 forms (Forms R and A) and released 247,348 pounds of releases (total on-site and off-site releases). Conversely, facilities in SIC 5169 filed 7.02 forms per facility while reporting on average just 3,091 pounds of releases per form. Those in SIC 5171 filed an average of 8.02 forms per facility while reporting 35,806 pounds of releases per form.⁸⁵ In general, the average amount released per facility is driven up by a relatively small number of very large releasers, while many facilities release very small or zero amounts. Hence it is clear that within SIC 5169 and SIC 5171 there is a larger-than-average number of facilities that release very small amounts of chemicals. At the same time, the number of forms per facility is more evenly distributed across facilities. For instance, nearly all bulk petroleum terminals (SIC 5171) handle the same chemical substances and, regardless of how small the facility is, nearly all handle large enough quantities to trigger reporting. However, many small facilities release insignificant amounts of chemicals. Within SIC 5169 15 percent of all reporting facilities had zero total chemical releases, yet still had to file multiple forms. The unusually small release totals in these industries, coupled with the significantly higher-than-average number of forms per facility, makes them worthy candidates for targeted burden relief.

To achieve targeted burden relief where it is most needed, SIC 5169 and SIC 5171 should be subject to a special small business reporting threshold to alleviate the excessive burden arising from the high number of TRI forms currently required that report insignificant chemical releases. The small business threshold would extend the standard employment size threshold for TRI reporting, currently 10 employers or greater, to a higher number,

⁸⁵ Calculations based on 2001 TRI data as reported in the 2001 Public Data Release.

e.g. 20, 50, or even 100 employees. By raising the reporting threshold with regard to employment, EPA can specifically exclude small businesses that release zero or insignificant amounts of TRI-listed chemicals. This is especially important in these two industries where the number of forms filed per facility is significantly higher than the average, more than double in the case of SIC 5171. As Advocacy commented during the 1997 expansion of the TRI, EPA's own economic analysis showed that the cost of reporting for SIC 5169 could eclipse many small firm's net revenues.⁸⁶ This industry-specific small business exemption provides the opportunity to relieve a significant burden of the TRI with no consequent reduction in data quality or availability to the public.

⁸⁶ Letter, Jere Glover, U.S. Small Business Administration, Office of Advocacy to Fred Hansen, Deputy Administrator, U.S. Environmental Protection Agency, "Toxic Release Inventory (TRI) Report Requirements - Industry Expansion; Chemical Wholesalers; Docket No. OPPTS-400104," December 24, 1996.

5 Conclusion

The Toxics Release Inventory program places a significant burden on the small businesses in the covered industries. While the 1994 addition of Form A created a feasible option for some filers, it did not extend relief far enough. The 500-pound threshold for total production-related wastes excluded many filers with extremely small releases from using the simplified form. EPA has since extended the reach of TRI with an expansion of covered industries and chemicals in 1997 and the designation of lead and lead compounds as persistent bioaccumulative chemicals in 2001. Both actions dramatically increasing the number of reports filed and the number of facilities required to report. Most of the filers under these program expansions reported significantly lower than average chemical releases, and most of the costs associated with this increased reporting have fallen on small businesses. Simple reforms to the TRI program would result in substantial cost savings to many filers with negligible effects on data quality.

The options for burden reduction discussed in this report offer simple yet practical means to minimize the burden of TRI reporting on small businesses while maintaining the quality and utility of data that the program provides to the public. An examination of the TRI filing data shows that currently there are a significant number of reports that show zero or minimal releases. The proposed options seek not only to maintain to the largest extent possible the percentage of aggregate data reported on Form R, they also ensure that local interests are preserved by seeking burden relief only for the class of filers that individually release minimal amounts of chemicals wastes. To balance cost reductions

with maintaining data quality, this report looks closely at specific thresholds under various reporting change scenarios that simultaneously reduce costs and maintain the quality, utility, and integrity of TRI data to public users.

Four simple reforms to the Toxics Release Inventory program would result in substantial cost savings to filers with minimal effects on data quality.

- Eligibility for Form A ought to be expanded by increasing the existing annual reportable amount (sum of elements 8.1 through 8.7 on Form R) to 1,000, 2,000, or 5,000 pounds. As an alternative, the ARA could be redefined as a facility's routine releases (element 8.1 only) or its releases and transfers (the sum of elements 8.1, 8.6, and 8.7), and the redefined ARA set at 500, 1,000, 2,000, or 5,000 pounds. Millions of dollars and thousands of hours of reporting burden could be saved as facilities switch from Form R to Form A.
- Form A could be modified to provide range estimates of selected release and waste data now reported on Form R. This Enhanced Form A would decrease the reduction of information from the potential substitution of thousands of the longer Form R's with the simpler Form A's. Therefore, communities would continue to receive regular information about routine chemical releases and waste management practices at these facilities. Since range estimates are currently allowed on Form R, TRI filers and data users are accustomed to the practice. With the enhanced Form A, EPA should

reinstate Form A for PBT reporters. In addition, EPA should reconsider allowing the *de minimis* concentration provision to apply to PBT reporters.

- A new Form NS should be created to allow facilities a cost-effective means to report no significant change in year-to-year activities that pertain to the TRI. A *de minimis* threshold would permit facilities with small on-site releases to file Form NS and avoid detailed annual reporting for sites that are of little public interest. All facilities affected by the TRI program, including those handling persistent bioaccumulative toxic chemicals, would benefit from Form NS. Facilities would be limited to four consecutive Form NS's for a particular chemical; they would need to file a Form R at least once every five years. Range-reporting would be allowed in section 8, as well as sections 5 and 6 on Form R.
- Petroleum wholesalers (SIC 5171) and chemical wholesalers (SIC 5169) should be subject to a special small business reporting threshold based on the number of employees. This would eliminate a large number of TRI reports with insignificant chemical releases.

These reforms, if adopted, would merely alter the forms filed by facilities. They would not eliminate facilities from the TRI database. These proposals would allow the TRI program to operate more efficiently as it continues to provide a high-quality public service to the public, regulators, and industry.